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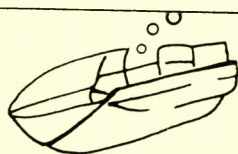
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DIVER™

VOLUME II

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Laguna Beach wildlife artist Brian Murphy's watercolor rendition of harbor seals at play. For more on Murphy and his work, turn to page 14.

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EDITORIAL

Time to do Some Dive Traveling

Summer's here! The sun's out, the sky's clear, and the travel bug has taken a big bite out of our backsides. So this issue we're embarking on a whirlwind dive tour of the Pacific Rim.

We start our tour at the Mexican border. PD's editor-at-large Joni Dahlstrom and field photographer Adam Zetter, no strangers to the back roads and isolated dive sites of Mexico, take us on a drive & dive trip down Baja's Highway One in search of the real Mexico, the one that sometimes gets lost in the hustle and bustle of airports and dive resorts and packaged vacations. Downshifting to a slower pace, Joni and Adam throw away their watches and adopt a kick-back attitude to match the kick-back countryside, and in doing so they discover a Baja of wonderful people, heavenly food and first-rate diving.

While at the tip of Baja we also take a moment to stop in and see contributing editor "Baja John" Francis, who's still roaming the beaches and cantinas of Cabo San Lucas looking for some trouble in which to hurl himself. This time out he runs across some beautiful diving at Bahia Chileno and the not-so-beautiful business of commercial marlin fishing.

From the southern shores of Baja California we leap across the Pacific to the Philippines, a country of over 7,000 islands and almost as many excellent dive spots. Veteran Philippines writer and photographer Lynn Funkhouser of Chicago takes us to what she considers to be the four hottest dive sites this multi-cultural island country has to offer. Prepare yourself for some breathtaking reefs and just about the most diverse marine life population in the world.

After our visit to the Philippines we head northeast to Hawaii, where we take a ride on the *Elite Too* dive charter boat out of Waianae Boat Harbor for some wreck and reef diving along Oahu's lee shore. Then it's back to the mainland where Seattle-based "Logbook" contributor Chris Huss relates a strange diving incident where he found himself sharing a holding pen with 1,700 teeth-snapping salmon.

Having been sufficiently unnerved by the salmon story we slide on down the Pacific coast to dive eight of the greatest pinnacles in Southern California. Feature editors Darren & Stacey Douglass visit well-known sites like Begg and Ship rocks

as well as a few spots with mysterious names like Skyscraper, Nine Fathoms and Matterhorn, pinnacles whose summits top out 10 fathoms below the surface, offering the ultimate in blue water diving for experienced divers with a bent for adventure.

After our wild and woolly pinnacle diving we come ashore at Huntington Beach where "The Pacific" contributing editor Rick Baker relates what he saw during the recent oil spill that closed much of Southern California's beaches to diving. The Huntington Beach spill provided us with the first opportunity to get an unedited look at how oil spill cleanup equipment really works. As a result, we've discovered that, in spite of what our government and the oil companies say, our "state-of-the-art" oil spill cleanup technology is in pretty sorry shape.

And finally, we end up right back where we started at the Mexican border, where writer and photographer Gilbert Cruz takes us diving in the waters off San Diego. He heads out searching for some pinnipeds to dive with, and ends up in the midst of a group of seals as happy to see Gilbert as he is to see them.

If you're not exhausted after all this globe-trotting we'll show you some ways to spend your money. To start with, in our "Equipment" column we offer for your consideration a buyers guide to diving computers. Then, writer Scott Sansenbach offers some tips for becoming a happy boat owner. Scott, himself the proud owner of a personal dive boat, asserts that too many divers buy the wrong boat at the wrong price for the wrong reasons, and end up getting pissed off about the whole process. Check out this article and avoid finding yourself in a similar predicament.

Had enough? Well, that's only about half of what you'll find in this heavyweight issue. So take a deep breath and turn the page. After this you're going to have to take a few days off just to catch your breath.

A reminder: the Scuba '90 diving show is coming up. This year it's being held June 22-24 at the Queen Mary in Long Beach, and we'd like to invite you to stop by the PD booth and talk some diving with us. Hope to see you there.

John Brumm
Editor

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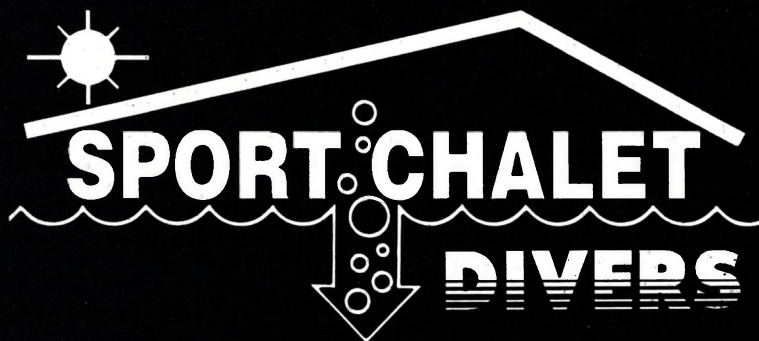
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Not Impressed with Diving's "Good Ole Boys"

I like PACIFIC DIVER a lot, especially since beginning California diving in June of 1989. Since that time I've logged about 50 dives — half in the Monterey area and half in the Channel Islands (in addition to the 30 or so tropical dives I'd already done the preceding year). The photos in the January/February '90 issue were particularly delightful, and those in the "Pictorial" and "The Ocean Pinnacles" articles were exquisite! I was at the Pinnacles in early December '89, and found everything as author Bruce Watkins described it, except that the *Macrocystis* had already been pretty much wiped out for the winter. Palm kelp was abundant on the bottom, however, and was doing 180-degree action in the heavy surge.

One thing, however, did concern me in the January/February issue, and that was Howard Hall's "Shark Rider" article. Hall sounds like a real "good ole boy," yuck-yucking it up over the fact that he could get his dive partner Lenora Carey to trust him and ride a giant fish he had never even seen before. Hall states in the article that he "would do just about anything" to get that shot, but it sounds like more than that was driving him. Didn't he trust Lenora to accept an honest appraisal of the situation and pursue the shot anyway? It didn't sound that way.

Yes, the dive turned out wonderfully, as did his photo of Lenora riding the shark, but it distresses me that an experienced diver like Hall thinks it's cool to mislead a less experienced diver. Who is he trying to impress? Lenora? His readers? And with what? His ability as a diver? With his skill as a con artist?

As a novice diver, all of my diving has been with more experienced divers, and I've had some exhilarating (and sometimes hair-raising) dives with some of them. So far, one of these more experienced buddies has become a diving fatality (not on a trip I was on). Reading Hall's article reinforces what I'd already figured out: if you feel unsafe about a dive, follow your own instincts, even if everyone else on the boat, including dive masters and instructors, says it's okay. If I had followed one experienced diver's suggestion, I could have been doing a 200-foot beach dive off Monastery Beach near Monterey (affectionately known as *Mortuary Beach*) after three p.m. on a winter afternoon without dive computers. (This is a steep beach where conditions can change dramatically in as little as 30 minutes, and where a

number of divers and nondivers are killed each year.)

Perhaps Howard Hall and divers like him have the confidence to do this kind of feat, but I'm a lot more impressed with a buddy's dedication to safe diving practices and sensitivity to my skill level than I am with his willingness to risk his life and possibly mine. My skill as a diver has steadily grown through diving with safety-conscious buddies in a variety of conditions. I don't think this would have been true if I'd let myself be dragged along by men who needed to prove something.

Nancy Leleau
Berkeley, CA

A Little Glasnost, PACIFIC DIVER Style

I would be grateful if you would send me a copy of your "Instructions to Authors." I really would like to contribute to your magazine in the future.

Yuri M. Yakovlev, Ph.D.
Institute of Marine Biology
USSR Academy of Sciences
Vladivostok, USSR



Yikes! This Guy's Really Pissed!

How sad to see your hitherto excellent magazine begin to follow in *Skin Diver's* despicable footsteps!

In the January/February '90 issue, you ran an article on how to plan a vacation by the Douglass team, who seem to have been allotted an excessive amount of space for their totally unremarkable travel features (the type that are found in all other dive publications). Do we really need to be told to take a passport abroad? Who are the idiots who need these articles anyway? I would hope one magazine could cater to experienced divers instead of newly-certified youngsters with no experience.

How sad, but alas, there's more. In the same issue your editor wrote an article about the *Kona Aggressor* that failed to discuss the quality of diving in the area (although he did mention the number of

dives per day). I'm sure some "divers" (lots of them, probably) are more concerned with food and sun decks than with diving, but they've got *Skin Diver* to cuddle up to, and they're welcome to it!

Please go back to publishing your quality articles. You've promised more coverage on Baja. I hope the people who like the *Aggressor* style of diving won't inflict themselves on the boats down in Baja and ruin the place. Thank the Lord for Tim Mearns, John Leiffe and the older less luxurious "real" dive operations of Baja, an area *Skin Diver* steers clear of because of its lack of PADI (Put Another Dollar In) organizations, luxury accommodations, and the fact that you can still free dive, spearfish, dive alone, etc. without some idiot PADI (or NAUI, for that matter) "dive master" baby-sitting you.

How about some articles addressing real concerns, not advertising commercial destinations! Give us something for the experienced and well-qualified diver; there's plenty out there for everybody else.

I know this all sounds negative, and that it's easy to criticize, but as a diver with 12 years experience who preceded BS-AC certification with three years of free diving, I do know of what I speak! As an experienced diver who does not like to sit on boats but who likes to dive and who loves to free dive with a speargun, I feel totally deserted by most of the commercial dive boats and by all of the diving magazines. Yours was/is the best, and the last willing to deal with real diving concerns. I'll keep recommending PACIFIC DIVER, but I hope to see you reject the trends of the January/February issue soon.

Mike Dewing
Los Angeles, CA

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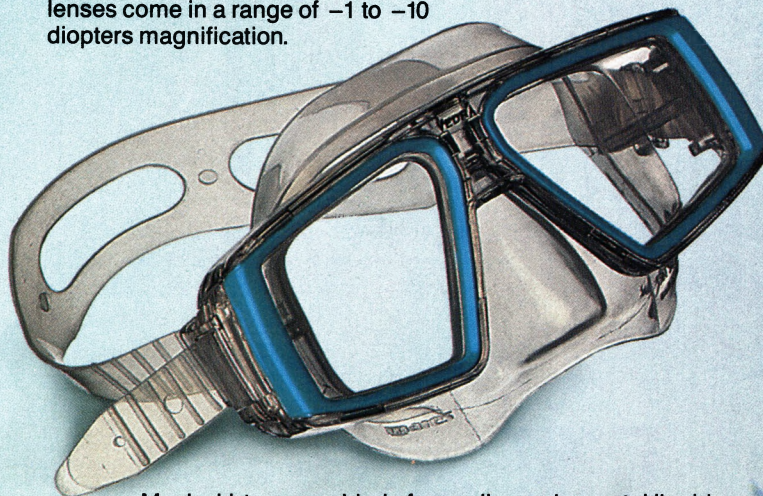
In the article "A Splash of Color" in your March/April '90 issue authors Darren and Stacey Douglass stated that Tanks D'Art does custom air brush work to customize scuba tanks. Actually, Tanks D'Art designed a special machine that customizes scuba tanks by printing and clear-coating a variety of colors and designs, but without using decals or air brushing techniques.

Dodie Meister, President
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Laguna Beach Artist Devotes Himself to the Protection of Marine Life



This issue's cover of *PACIFIC DIVER* was painted by Laguna Beach marine life artist Brian Murphy. Formerly a technical graphic artist for a civil engineering firm, 28-year-old Murphy now spends his time refining his watercolor techniques while actively participating in environmental causes that focus on the marine environment.

Living on the cliffs above Shaw's Cove, a popular Laguna Beach dive site, Murphy's love for the ocean led him to choose watercolors as his primary artistic medium. When not in front of his easel he can be found out in the water collecting personal underwater experiences which he applies to canvas.

Murphy has long been interested in marine environmental work. While in Florida he was involved in bottlenose dolphin research, and while in Hawaii the subject of study was the humpback whale. Now in Southern California, he works closely with the local group "Friends of the Sea Lion" and with the San Francisco-based Earth Island Institute, the organization spearheading the fight to stop the wholesale slaughter of dolphins by the tuna industry. Murphy donated a number of his works to Earth Island's "Save the Dolphins" campaign which are now on display at the United Nations World Headquarters in New York City.

A collection of Murphy's paintings and sculptures are on display at the Wildlife Gallery, 1259 S. Coast Hwy (across from the Pottery Shack) in Laguna Beach. For more information about Brian Murphy's artistic or environmental work, or about the Wildlife Gallery, contact Pablo at (714) 494-7456. Or better yet, stop by and get an eyeful of outstanding wildlife art in a variety of artistic mediums.

The Ultimate Irony: Gill-Netters Sue Oil Company for "Damaging the Marine Ecology"

Here's one you're not going to believe. Twelve gill net fishermen have banded together to sue the owners of the *American Trader* (the tanker that spilled 400,000 gallons of oil on Southern California beaches) for \$10 million. The suit was filed because the gill-netters felt the oil spill had destroyed their fishing grounds; you know, those sections of the ocean where they string their nets and kill anything that happens to swim by.

Spokesmen for the gill-netters stated that, with the exception of the beaches themselves, gill-netters have been the most affected by the oil spill. Well, wake up gill-netters! With the exception of the marine animals themselves, Southern Californians are the most affected by gillnetting's indiscriminate fishing practices.

A group of gill-netters suing an oil company for "damaging marine populations" is like two pyromaniacs arguing over who gets to throw the first match. What possible difference does it make to the rest of us whether our marine populations are destroyed by oil or by gill-netters? Either way, the fish and sea lions and whales are going to be gone.

MONTEREY BAY AQUARIUM FEATURES "PACIFIC TREASURES" EXHIBITION

Planning on taking a diving excursion to Monterey? If so, be sure to stop by the Monterey Bay Aquarium for a visit. Through October 21, 1990, the aquarium is offering a special exhibition called "Living Treasures of the Pacific" featuring sea creatures from all over the Pacific Rim.

Local divers who wish to participate in the aquarium's volunteer diving program are invited to call the aquarium's volunteer department at (408) 648-4860 or (408) 648-4888.

L.A. County Announces its 1990 Advanced Diver Program

This summer, from June to August, the Los Angeles County Department of Parks and Recreation, through its Underwater Instructors Association (UIA), is once again sponsoring its Advanced Diver Program (ADP). The ADP, started in the 1960s, is an eight-week training program that includes lectures, pool work, ocean dives, a weekend at Catalina Island and a graduation banquet.

For more information on the ADP, contact the Los Angeles County office at (213) 327-5311.

Continued





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E. Bridgewater, Subsea Divers, 516 N. Bedford St., Rte. 18
Holyoke, Holyoke Underwater Supply, 354 High St.
N. Chelmsford, Diver's World, 195 Princeton St.
Worcester, Central Scuba, 304 Shrewsbury St.

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Wolfeboro, North Country Scuba, Main St.

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Avon, Divers Two, 1 Main St.
Edison, Ocean Explorers Aquatic Center, 871 Rte. 1
Northfield, East Coast Diving Supply, 1002 New Rd.
Princeton, Princeton Aqua Sports, 306 Alexander St.
Toms River, Underwater Discovery, 2722 Rte. 37 East

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Brooklyn, Atlantic Divers, Ltd., 57 President St.
Brooklyn, Scuba Network, 200 - 6th St.
Buffalo, Great Lakes Divers, 244 Niagara Falls Blvd.
Little Neck, Dolphin Divers, 250-14 Northern Blvd.
New York City, Scuba World, 167 W. 72nd St.
Pleasant Valley, Hudson River Metal & Scuba, Rt. 44, Rd. 3
Queens, Sea Horse Divers, 95-58 Queens Blvd.
Staten Island, East Coast Diving, 1500 Hylan Blvd.
West Nyack, Scuba Training & Equipment Center, 12 Bobby Lane

PENNSYLVANIA

Bensalem, Mid Atlantic Scuba Center, 3600 St. Rd.
Erie, Divers World, 1904 W. 26th St.
Harrisburg, Harrisburg Scuba Center, 3997-A Sunnycrest Dr.
Hesston, Deep 6 Dive Center, Rd. #1
Irwin, Randy's Dive Shop, Rd. #6 Sandyhill Rd.
Lancaster, Smokey's Divers Den, 412 N. Duke St.
McKees Rocks, Aquatic Adventures, 5992-B Steubenville Pike
Murrysville, Pittsburgh Scuba East, 3843 Old Wm. Penn Hwy.
Philadelphia, Aqua Hut & Scuba Shop, 4327 Main St.
Wexford, Smiley's Scuba Shop, 12985 Perry Hwy.

RHODE ISLAND

Jamestown, Ocean State Scuba, 23-A Narragansett Ave.
Narragansett, Narragansett Pier Divers, 145 Boon St.

VIRGINIA

Fairfax, Sea Ventures, 9444 Main St.
Falls Church, American Water Sports of Virginia, 6182A Arlington Blvd.
Richmond, Scuba Center, 1412 Starling Dr.
Vienna, The Wet Ones, 163 Glyndon St.

SOUTHEAST

ALABAMA

Pelham, Blue Water Scuba, 743 Industrial Park Dr.

FLORIDA

Big Pine Key, Underseas, Mile Marker 30.5, U.S. 1
Boca Raton, Force E, 7166 Baracasa Way
Boca Raton, Force E, 877 E. Palmetto Park Rd.
Clearwater, Mac's Sports, 2126 Drew St.
Destin, Scuba Tech of N.W. FL, 404 Hwy. 98
Fort Myers, Ken's Sports, 4600 Cleveland Ave.
Fort Pierce, Dixie Divers, 1717 South U.S. 1
Fort Pierce, Dixie Divers, 14601 Orange Ave.
Fort Lauderdale, Divers Unlimited, 440 Seabreeze
Fort Lauderdale, Force E, 2104 W. Oakland Park Blvd.
Fort Lauderdale, Professional Diving Schools of FL, 801 Seabreeze Blvd.
Gainesville, Aquatic Center, 3548 S.W. Archer Rd.
Hollywood, Divers Unlimited, 6023 Hollywood Blvd.
Jacksonville, Aquifer Dive Center, 4564 Atlantic Blvd.
Jacksonville, Aquifer Dive Center, 1236 S. 3rd St.
Key Largo, Atlantis Dive Center, 51 Garden Cove
Lake Worth, Coastal Scuba Center, 2001 10th Ave. North
Longwood, Scuba Diversions, 1667 S. Highway, # 105
Melbourne, Professional Diving Ind., 1693 North U.S. 1
Miami, Austin's Diving Center, 10525 S. Dixie Hwy.
Miami, Florida Frogman, 2852 N.W. 72nd Ave.
Miami, Scuba Sports, 7720 N. Kendall Dr.
Miami, Urge 2 Submerge, 11278 S.W. 137th Ave.
Naples, Naples Dive Center, 10295 Plaza North, N. Tamiami Trail
Naples, Naples Dive Center, 1949 Davis Blvd.
N. Miami Beach, Scuba Sports of N.M.B., 16604 N.E. 2nd Ave.
N. Palm Beach, Force E, 11911 U.S. Hwy. 1, #111

Orlando, Jim Hollis' Scuba World, 5107 E. Colonial Dr.

Orlando, Sun Scuba, 8092 S. Orange Blossom Trail
Palm Bay, Dixie Divers, 4700 Babcock St. N.E.
Pinellas Park, Tackle Shack, 7801 - 66 St. North
Pompano Beach, Force E, 2700 E. Atlantic Blvd.
Pompano Beach, Orbit Marine Sports, 101 N. Riverside Dr., #206
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Sarasota, Florida Down Under, 5714 Clark Rd.
Stuart, Dixie Divers, 1839 S.E. Federal Hwy.
Sunrise, Scuba Sports of Plantation, 2090 N. University Dr.
Tallahassee, Barry's Dive Center, 2020 Northpoint Blvd.
Tallahassee, Barry's Dive Center, 1362 Lake Bradford Rd.
Tampa, Marine & Outdoor World, 415 S. Dale Mabry Hwy.
Tampa, Tampa Dive Center, 13246 N. Dale Mabry
Tavernier, Florida Keys Dive Center, Mile Marker 90 1/2
Temple Terrace, Terrace Watersports, 9228 North 56th St.
West Palm Beach, Dixie Divers, 1401 S. Military Trail
West Palm Beach, Force E, 1399 N. Military Trail

GEORGIA

Marietta, Dive Shop IV, 950 Cobb Parkway South
Roswell, Sea Sports, 11240 Alpharetta Hwy., #200

TENNESSEE

Knoxville, Currant Enterprises, 600 Magnolia Ave.
Nashville, Neptune Diving & Ski Co., 2610 Franklin Rd.

MIDWEST

ILLINOIS

Chicago, Berry Scuba Co., 6674 Northwest Highway
Chicago, Underwater Safaris, 620 N. La Salle
La Grange, Great Lakes Divers, 541 S. La Grange Rd.
Lombard, Berry Scuba Co., Yorktown Mall
Skokie, Scuba Systems, 3919 Oakton St.
Villa Park, Underseas Scuba Center., 611 N. Addison Rd.

INDIANA

Indianapolis, Midwest Scuba Center, 4306 W. 96th St.

MICHIGAN

Battlecreek, Sub-Aquatic Sports & Service, 347 N. Helmer Rd.
Farmington, Don's Dive Shop, 29480 10 Mile Rd.
Mt. Clemens, Bruno's Dive Shop, 34710 Gratiot
Royal Oaks, Recreational Diving Systems, 4424 N. Woodward

MINNESOTA

Eagan, Aquasports Scuba, 1571 Century Point
Maplewood, Northland Divers, 3000 White Bear Ave.
Minneapolis, Scuba Center, 5015 Penn Ave. South

MISSISSIPPI

Ridgeland, Down Under, 130 Dyess Rd.

MISSOURI

Springfield, Aquasports Scuba Center, 5601 S. Campbell
St. Louis, The Dive Shop, 9836 Manchester Rd.
St. Louis, Underwater Sports, 8340 Watson

OHIO

Cincinnati, Cincinnati Dive Center, 8412 Winton Rd.
Cincinnati, Scuba Unlimited, 8966 Blue Ash Rd.
Lyndhurst, Diver's Port O'Call, 5418 Mayfield Rd.
Reynoldsburg, Sub-Aquatics, 8855 East Broad St.

OKLAHOMA

Oklahoma City, Frank's Underwater Sports, 1415 N. May Ave.
Tulsa, Poseidon Adventures, Ltd., 3402 South Peoria

WISCONSIN

Baraboo, 3 Little Devils, 5780 Hwy. 123, Rte. 4
Plover, Diveport Scuba Center, 1601 Mall Rd.
Sheboygan, Lakeshore Scuba, Ltd., 239 Pennsylvania Ave.

GULF STATES

ARKANSAS

Henderson, Lake Norfolk Scuba Center, Lake Norfolk Marina
Pine Bluff, Arkansas Sport Divers, Pines Mall #102

LOUISIANA

Jefferson, Vineyards Dive Shop, 2929 Jefferson Hwy.
Lake Charles, Venture Sports, 1409 Ryan St.
Slidell, The Dive Buddy, 1302 Corporate Square

TEXAS

Abilene, Underwater Connection, 4103 North 1st St.
Amarillo, Scuba Training Center, 2600 Paramount, B5
Arlington, Arlington Scuba Center, 2414 W. Park Row Dr.
Austin, Austin Scuba Centers, 6801 N. Lamar
Austin, Austin Scuba Centers, 1004 B. Romaeria
Corpus Christi, See Sea Divers, 4012 Weber
Dallas, Gator's Scuba Mart, 4020 N. MacArthur Blvd., Ste. 102
Dallas, Scuba West, 5500 Greenville, Ste. 901
Dallas, Scuba West, 2552 Joe Field Rd.
Dallas, Scuba West, 14902 Preston

Dallas, Scuba West, 9241 Skillman

Denton, Island Divers, 1704 N. Elm
Fort Worth, Scuba Sphere, 6703 Camp Bowie Blvd.
Grand Prairie, Tuckers Dive Shop, 2025 E. Main
Houston, Kenlee's West, 5539 Richmond Ave.
Longview, Discover Scuba, 701 N. High St.
Richardson, Diver's World, 63 Richardson Hts. Village
San Antonio, Diver World Scuba Center, 8507 N. McCullough
Spring, Diver's Locker, 5010-F Lovetta
Webster, Sport Divers of Houston, 125 W. Bay Area Blvd.
Wichita Falls, Underwater Connection, 1015 9th St.
Woodland, Woodlands Scuba Center, 25170 I-45 North

WEST

ALASKA

Anchorage, Sunshine Sports, 1231 W. Northern Lights

ARIZONA

Mesa, El Mar Diving Center, 2245 W. Broadway

CALIFORNIA

Brea, Sports Chalet, 2500 E. Imperial Hwy., Ste. 150
Encinatas, Ocean Enterprises, 191 N. El Camino Real
Escondido, Sports Chalet, 1511-6 East Valley Parkway
Fort Bragg, Sub-Surface Progression, 18600 Highway 1
Fresno, Bob's Dive Shop, 4374 N. Blackstone
Huntington Beach, Sports Chalet, 16242 Beach Blvd.
La Canada, Sports Chalet, 920 Foothill Blvd.
La Mesa, Sports Chalet, 5500 Grossmont Center Dr.
Los Angeles, Sports Chalet, 100 N. La Cienega Blvd.
Malibu, Malibu Divers, 21231 Pacific Coast Hwy.
Marina del Rey, Sports Chalet, 13455 Maxella Ave.
Mission Viejo, Sports Chalet, 27551 Puerta Real
Modesto, American Aquatic Adventures, 1104 Scenic Dr.
Monterey, Aquarius Dive Shop, 2240 Del Monte Ave.
Newport Beach, Aquatic Center, 4537 West Coast Hwy.
Novato, The Pinnacles Dive Center, 875 Grant Ave.
Pleasanton, Scuba Unlimited, 4000 Pimlico Dr., #114
Redondo Beach, Dive 'N Surf, 504 N. Broadway
Redondo Beach, Sea D Sea, 1911 S. Catalina Ave.
Redwood City, Wallin Dive Store, 517 E. Bayshore Rd.
Reseda, Scuba Duba Dive, 7126 Reseda Blvd.
Sacramento, Scuba World Sacramento, 2519 El Camino Ave.
San Diego, Ocean Enterprises, 7710 Balboa Ave., #101
San Diego, Sports Chalet, 3695 Midway Dr.
San Francisco, Bamboo Reef Enterprises, 584 Fourth St.
San Luis Obispo, Slo Ocean Currents, 3121 #B S. Higuera
San Rafael, Marin Skin Diving, 3765 Redwood Hwy.
Santa Barbara, Underwater Sports, Breakwater Harbor
Santa Clara, Wet Pleasure, 2245 El Camino Real
Santa Monica, Blue Cheer, 1110 Wilshire Blvd.
Stockton, Stockton Aquatic Center, 1127 W. Fremont St.
Thousand Oaks, Scuba Luv, 704 Thousand Oaks Blvd.
Valencia, Sports Chalet, 24200 Lyons Ave.
Ventura, Gold Coast Scuba, 955 E. Thompson Blvd.
Yuba City, Aqua Divers, 300 Carriage Square
Walnut Creek, Scuba Town, 2631 N. Main St.

COLORADO

Boulder, Weaver's Dive Center, 637-L S. Broadway
Eagle Vail, Beaver Divers, 41199 U.S. Hwy. 6 & 24
Englewood, The Scuba Shoppe, 9624 E. Arapahoe
Lakewood, Rocky Mountain Diving Center, 1920 Wadsworth Blvd.
Lakewood, The Scuba Shoppe, 160 S. Union Blvd.

IDAHO

Coeur d'Alene, Diver's West, 1675 Apple Way

NEVADA

Las Vegas, Blue Seas Scuba Center, 3993 Spring Mountain Rd.
Reno, Sierra Diving Center, 104 E. Grove St.

NEW MEXICO

Albuquerque, New Mexico Scuba Center, 2529 San Mateo, N.E.

OREGON

Aloha, Roger's Pacific Watersport, 17128 S.W. Shaw
Corvallis, Anderson Sporting Goods, 137 S. Third
Corvallis, Water Sports 2, 927 N.W. Circle Blvd.
Portland, Streed's Scuba, 8450 S.E. 82nd Ave.
Salem, Anderson Sporting Goods, 241 Liberty St.
Salem, Underwater Adventures, 691 Lancaster Dr., N.E.

UTAH

Salt Lake City, Neptune Divers, 2445 S. 900 East

WASHINGTON

Bellevue, Underwater Sports, 12003 N.E. 12th St.
Bremerton, Puget Sound Dive Center, 1921 Wheaton Way
Everett, Underwater Sports, 4809 Evergreen Way
Federalway, Underwater Sports, 3442-8 Pacific Hwy. South
Kirkland, American Sport Diver, 12630 120th Ave., N.E.
Lynwood, Lighthouse Diving Center, 5421 - 196th St., S.W., #6
Seattle, Lighthouse Dive Center, 8215 Lake City Way
Seattle, Underwater Sports, 10545 Aurora Ave. North
Spokane, Down Under Divers, West 24th Third Ave.
Tacoma, Underwater Sports, 9608 40th S.W.

DIVERS UPDATE

Foundation for PRIDE Looking for a Helping Hand to Attend Australian Conference

by Suzan Meldonian

The International Cetacean Education and Research Center (ICERC), in the interests of worldwide cetacean preservation, is holding its 2nd International Dolphin and Whale Conference May 26-30, 1990, at Valla Park Conference Center in New South Wales, Australia.

Thirty-four speakers from around the world will meet to discuss recent scientific and educational developments with regards to cetaceans.

Attending from the United States will be Dr. Betsy Smith, who established Inreach, a project to study the interactions between Atlantic bottlenose dolphins and neurologically impaired children; Dr. Roger Payne, senior scientist for the World Wildlife Fund; Dr. David Nathanson, who works with spinal and head injuries; Joan Ocean, cofounder of the Dolphin Connection; Dr. O. Fred Donaldson, who researches interspecies communications with children and dolphins; Richard O'Barry, author of "Behind the Dolphin Smile"; Kim Rosen, founder of Interspecies Communication; David Schmid, designer of Dolphin's World; Patricia St. John, research director of Midpoint, where dolphin interactive techniques are applied to autistic children; Neville Rowe, a psychic channel; and Timothy Wyllie and Alma Daniel, authors of "Delta-Factor Extraterrestrials and Angels."

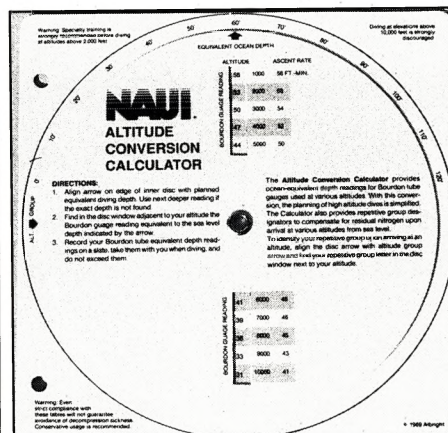
One of the central topics of discussion at the conference will be the research done by Dean Bernal, marine program director of the Foundation for the Protection of Reefs and Islands from Degradation and Exploitation (PRIDE). In 1988, PRIDE

succeeded in getting 19 land and sea national parks legally designated, and it pioneered the first successful conch farm.

Besides working toward the designation of sea parks, Bernal's energies have been devoted to a wild Atlantic bottlenose dolphin named Jojo that roams a 26-mile section of ocean off Provo, Caicos, British West Indies (BWI). Jojo has never been fed by humans, swims free in the ocean and comes and goes with no barriers or fences. But in spite of this lack of human intervention in the animal's living habits, Bernal has succeeded in communicating over 30 hand signals to Jojo.

Stray Atlantic bottlenose dolphins have been adopting humans all around the world. In Ireland there's a dolphin named Fungi, there's Freddy in England, Jean Louis off Brittany, France, and Fanny near Marseille, France. Participants in the conference hope to put together information as to why these dolphins are warming to humans, and Bernal's experiences will be central to this attempt at understanding.

Unfortunately, in spite of the fact that much of PRIDE's work with Jojo will comprise the major topics of the conference, because of a lack of funds Bernal and the Foundation for PRIDE will not be able to attend. That is, unless he can get a little help from friends. Anyone interested in participating in sponsoring Bernal so he can represent PRIDE at the conference is encouraged to contact Chuck Hesse, Foundation for PRIDE, 7600 S.W. 87th Ave., Miami, FL 33173. The foundation is registered in both Washington DC and Turks and Caicos, BWI, as a nonprofit public foundation.



Altitude Diving Calculator is now Available from NAUI

An easy-to-use rotary calculator from NAUI provides the necessary information to plan safe dives in waters that are over 1,000 feet above sea level. Called an Altitude Conversion Calculator, the unit quickly provides bourdon gauge readings for equivalent ocean depths for dives in waters up to 10,000 feet in altitude and is fully compatible with NAUI's new Dive Time Calculator.

The new NAUI conversion calculator also tells you how much to compensate for residual nitrogen when planning altitude dives for divers who have not had a full day to adjust their body nitrogen levels to the higher diving altitude.

The Altitude Conversion Calculator can be purchased from any NAUI dive store. For a listing of NAUI stores in your area, call (714) 621-5801.

Bojac Aquatic Center Offers an Alternative to Recertification

The controversy over whether certification cards should be renewable has the diving world divided. But Bojac Aquatic Center of Waipahu, Hawaii, feels it might have the answer.

Bob Hoffman of the Bojac Aquatic Center feels that most divers need updating or refresher training rather than recertification. He feels so strongly about this that he is willing to absorb the costs of a refresher course for all certified divers regardless of national certification.

The Bojac Aquatic Center, with its own indoor, solar-heated pool, provides one hour of classroom retraining and one hour of pool retraining to any certified divers who feel unsure about their dive skill levels. Subjects covered in the classroom include physics, physiology, tables and problem solving. In the pool students practice donning/doffing equipment, entries, regulator clearing, mask clearing, buddy breathing, spare air breathing and emergency free swimming ascents.

The instruction is free; however, divers

It's Here! Watercolors U/W Film is Now Available

Watercolors 100, the slide and color print film that we mentioned in the March/April issue, is now available. According to Watercolors 100 Co., the 100 ASA 36-exposure slide and 100 ASA 24-exposure print films provide high definition, fine detail, rich texture and depth and stunning color reproduction, creating pale blues and hot pinks and reds.

With every box of film an insert is included detailing 20 tips on underwater photography by underwater photographer Carl Roessler. The film is available individually or in 10-roll travel packs.

For more information, contact Watercolors 100 Co., P.O. Box 533, Sharon, MA 02067, or call (617) 784-9069.



must supply their own masks, fins and snorkels. Divers with their own equipment need only pay for any air used. Divers without their own equipment will be charged \$5 for air and the use of the center's equipment. At the completion of the retraining an evaluation will be given to any diver requesting one. Further training is offered to anyone desiring to improve or expand his diving skills.

The classes are scheduled for 9 a.m. Sundays. Divers completing the training are invited to attend a Bojac Dive Club dive held every Sunday at 11 a.m. There is no charge for participation in the club dive, but divers must supply or rent their own equipment.

Any divers passing through Oahu to the outer Hawaiian islands or going on to the South Pacific who want to take advantage of this program are invited to call Bojac Diving Center at (808) 671-0311, Fax 808-671-1670, or write to Bojac at 94-801 Farrington Way, Waipahu, Hawaii 96797-3193.

Scuba '90 Returns to the Queen Mary in Long Beach

Scuba '90, The Dive Show, will take place on board the *Queen Mary* in Long Beach, June 22-24. The exhibit hall will be filled with shipwreck artifacts, an underwater photo gallery, dive equipment exhibits, dive travel representatives and scuba experts. There will be a continuous film festival and an extensive seminar schedule covering a wide range of topics.

On Saturday night, June 23, a Fiji party will be given in the Spruce Goose dome. Hosted by Sea Safaris and the Fiji Tourism Bureau, the highlight of the party will be a Fiji trip giveaway.

For more information, contact Scuba '90, P.O. Box 11231, Torrance, CA 90510; (213) 516-0569.

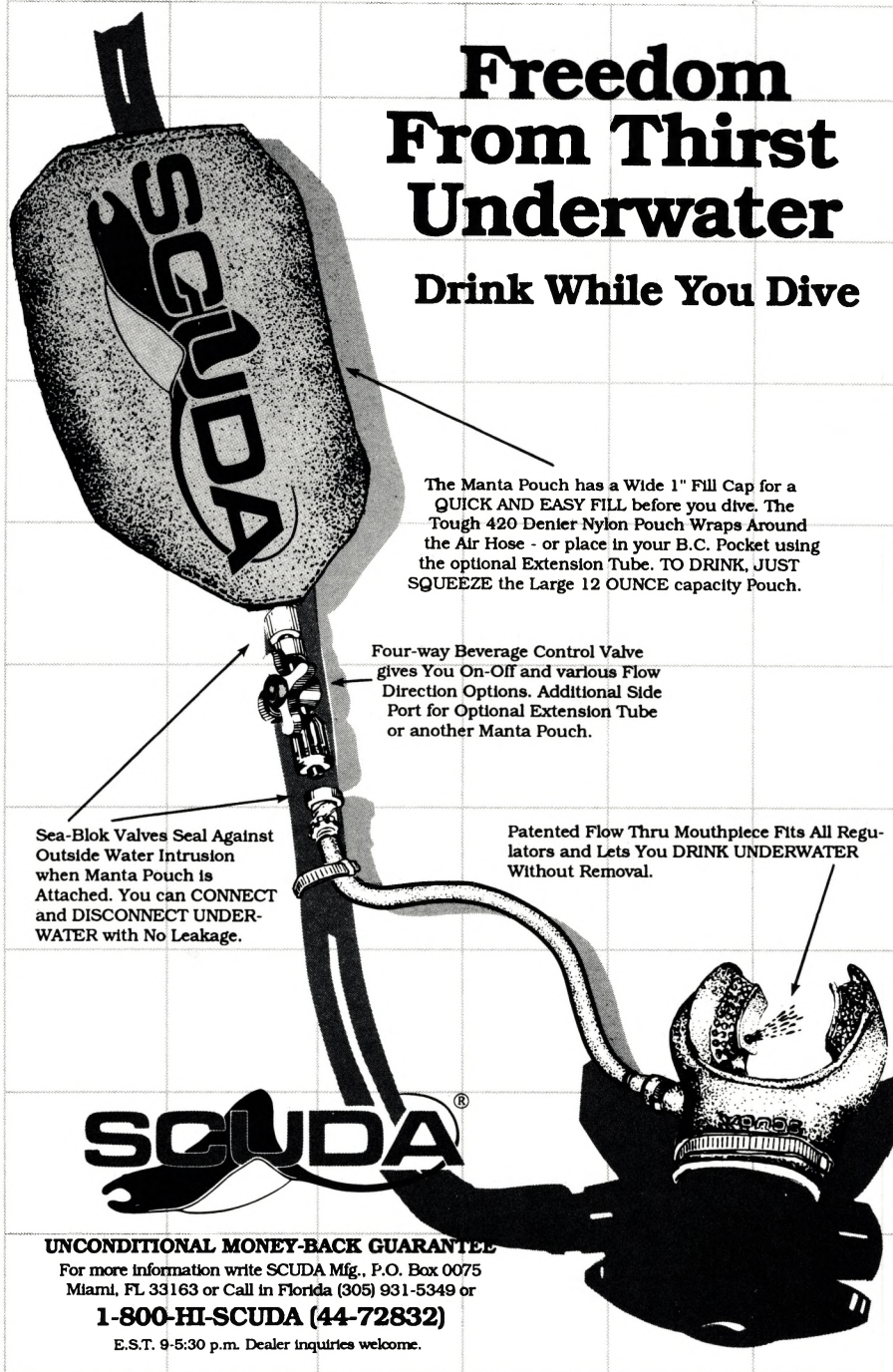
DAN Benefit Trip Aboard Truk Aggressor April 7-14, 1991

Support the Divers Alert Network (DAN) and dive Truk Lagoon aboard the new *Truk Aggressor*. The 120-foot dive vessel has 10 double staterooms with private heads and a 13-knot cruising speed. You'll dive clear-water reefs and 10,000 foot walls (with 150-foot plus visibility) as well as visit some of Truk's famous World War II wrecks.

The cost for the trip is \$1,795. A representative from DAN's headquarters at Duke University will lead the group to present information on the latest research in scuba safety. For more information, call (800) 348-2628 or write DAN Benefit Truk Trip, c/o Aggressor Fleet, P.O. Drawer K, Morgan City, LA 70381. Continued

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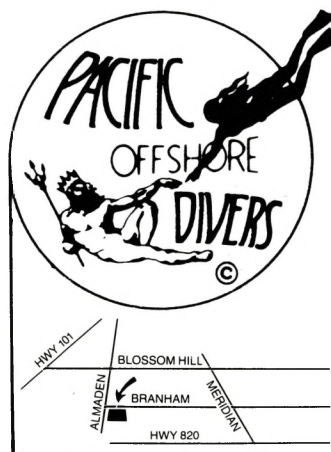
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Santa Barbara's Sea Center Presents a New "Discovery Cart"

The Sea Center, a mecca for fledgling marine biologists located on Santa Barbara's Stearns Wharf, has a new hands-on display called the "Discovery Cart" that is open twice a month on a regular basis. The cart is loaded with fascinating items from the marine world, including whale baleen and bones, local sea shells, sponges, mermaid's purses and crab molts. Docents are available to describe the contents and answer any questions about the cart or any other exhibits at the Sea Center.

The "Discovery Cart" is available to

Sea Center visitors on the first and third Sundays of every month, from 2 to 4 p.m. Admission to the Sea Center is \$1 for adults, 50 cents for children under 12 and free for children under two. The center is open daily from 10 a.m. to 5 p.m. For more information, call (805) 963-1067.

Seattle SeaFest Outdoor Show Scheduled for August 11-12

The 10th annual SeaFest will be held on August 11 and 12 at the Seattle Lighthouse Diving Center on Lake City Way. SeaFest is an outdoor consumer show with

exhibits from equipment manufacturers and the dive travel industry. Over 25 companies will be represented and over \$10,000 in prizes will be given away.

For more information, contact Lighthouse Diving Center, 8215 Lake City Way, Seattle, WA 98115; (206) 524-1633.

NOAA Continues to Study Feasibility of San Juans Sanctuary

At the direction of Congress, the National Oceanic and Atmospheric Administration (NOAA) is in the process of verifying the justification of "National Marine Sanctuary" status for the San Juan Islands and the Strait of Juan de Fuca. The verification process is expected to involve local, tribal, state and U.S. agencies plus interested citizen and trade groups.

A steering committee is being formed whose goal, in addition to the sanctuary designation, is to provide an "umbrella" plan for managing the San Juan Islands/Strait of Juan de Fuca area.

The committee is looking for information and assistance to enable it to complete the following projects:

1. The charting of popular dive locations and the documentation of their use.
2. A general verification study of unique habitats.
3. The underwater photography of biological station points, i.e. prior to oil spills and after oil spills.
4. Sport and fisheries depletion studies.
5. Development of an educational curriculum via underwater video and/or traveling exhibit for various age groups.

Individuals or dive groups interested in participating in gathering data can contact Barry Wenger, (206) 459-6767 at the Washington State Department of Ecology.

Special Programs Allow Teenagers to Experience the BVIs

Actiondive is a program offering young adults 14 to 19 (grouped by ages) an opportunity to participate in a variety of skill-building experiences while living aboard sailing yachts in the British Virgin Islands (BVIs).

Actiondive "divemates" explore the beautiful reefs and wrecks of the BVIs. The program concentrates on diver education and participants have the opportunity to earn advanced certification, rescue certification and specialty certifications in night diving, wreck diving, marine awareness and underwater photography.

For noncertified individuals, Actiondive's sister program, Actionsail, offers live-aboard sail training and an open water

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diving certification program also in the BVIs.

For more information about either the Actiondive or Actionsail programs, contact Actionquest, Inc., P.O. Box 5507, Sarasota, FL 34277; (813) 924-6789.

Worldwide Research Projects Seeking Volunteers

The University of California Research Expeditions Program (UREP) is seeking volunteers this summer to lend their time and talents in a variety of worldwide field expeditions. Under the guidance of University of California researchers, volunteer participants can investigate everything from endangered pelicans in California to the traditional textiles of Bolivia.

Research projects span a variety of disciplines include archaeology, botany, sociology, animal behavior and marine studies and take place in locations as varied as the mountains of the Himalayas to the island of Bali to the mountains of California. They are conducted in cooperation with scientists from developing countries as part of a UREP program called SHARE (Science Serving Humanity and Research for the Environment).

Participants in all UREP expeditions make a contribution to cover their expenses which helps make the research possible. The amount qualifies as a charitable contribution. Most projects do not require previous experience.

For a free catalog and application, contact UREP, Desk L-02, University of California, Berkeley, CA 94720; (415) 642-6586.

Traveler Insurance Available Through PADI Travel Network

Divers visiting any of the more than 90 PADI Network Resorts of the PADI Travel Network can travel more securely, thanks to optional insurance provided by Access America, a subsidiary of Blue Cross and Blue Shield. For only \$49, a traveler is insured \$1,200 for trip cancellation, \$100 for travel delay, \$4,000 for medical expenses, \$500 for baggage loss, damage or theft, and \$100 for baggage delay.

Besides financial security, this travel insurance also provides a 24-hour hotline for traveler assistance for travel document and ticket replacement, emergency cash transfers, emergency messages, medical assistance, transportation, consultation and legal assistance.

For more information on Access America insurance, contact your local PADI dive center or write to PADI, 1251 E. Dyer Rd., #100, Santa Ana, CA 92705-5605.

CCC Gives Green Light to "Wreck Alley L.A." Artificial Reef Project

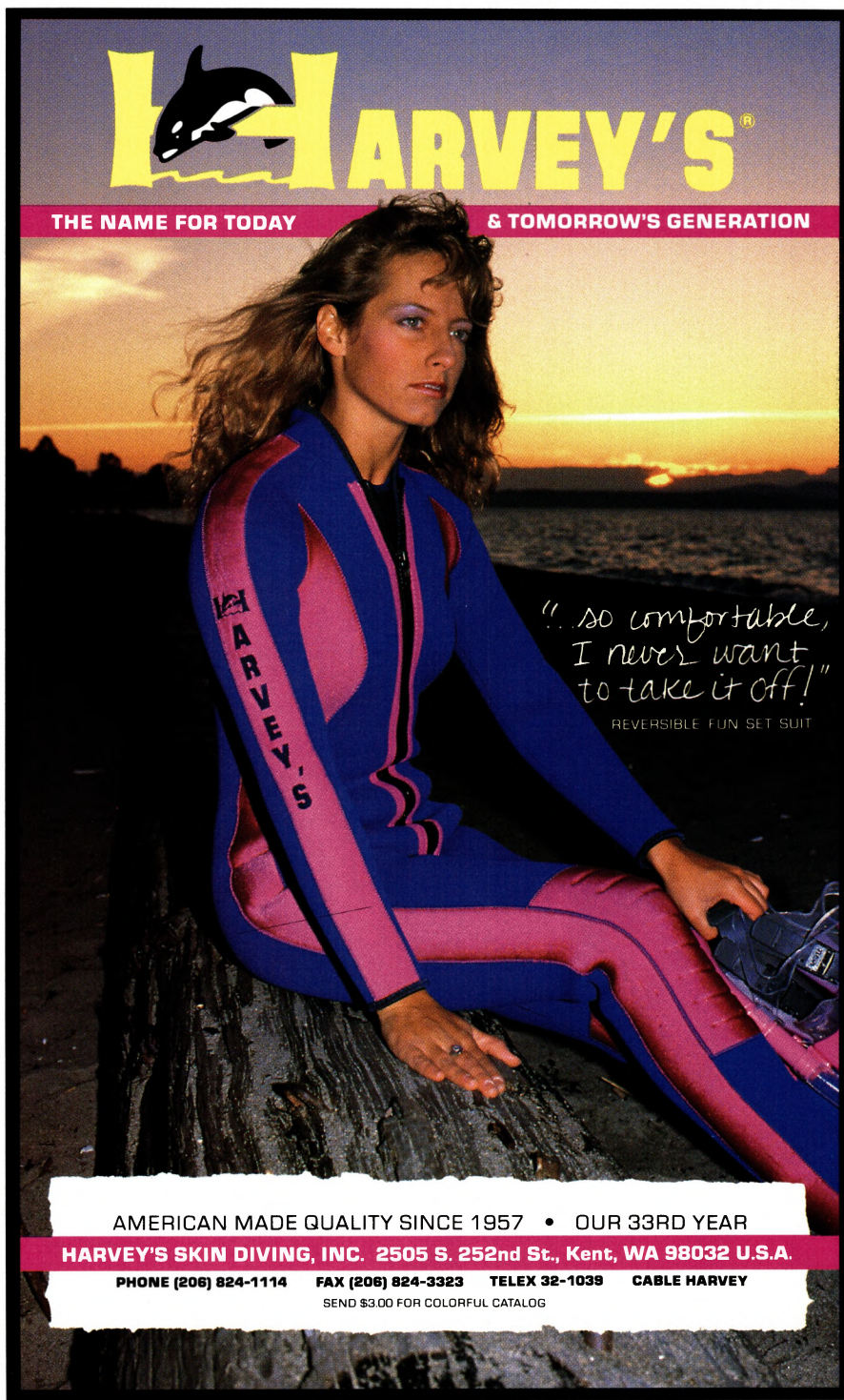
Approval has just been granted by the California Coastal Commission for the Greater Los Angeles Council of Divers (GLACD), in conjunction with the California Fish & Game, to start sinking wrecks for the creation of an artificial reef project off the Palos Verdes peninsula.

The GLACD and Fish & Game have been trying to get the Los Angeles-area wreck program off the ground for quite some time. Finally, forward progress is

being made with the donation to the state of California of a 130-foot North Sea Trawler which has been designated as the first wreck to be sunk in the "Wreck Alley L.A." program.

However, in order for the trawler to be sunk it must first be stripped and cleaned to meet EPA (Environmental Protection Agency) standards. And that's going to cost approximately \$5,000. So the GLACD is asking members of California's diving community for contributions to its trawler cleaning fund.

If the GLACD is able to raise enough



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money the trawler will be cleaned and sunk, and then efforts will be turned toward getting the *Princess Louise*, the former cruise liner and restaurant that capsized in Los Angeles Harbor last year, stripped and cleaned so it can join the trawler on the bottom. If that works out, then GLACD hopes to sink a number of WWII Liberty ships and other surplus naval vessels in the same general vicinity.

"Wreck Alley L.A." will be located off the Palos Verdes peninsula between Whites Point and Point Vicente in 80 to 100 feet of water.

Anyone wishing to participate in the "Wreck Alley L.A." project is encouraged to donate whatever financial support is possible to the cleaning of the trawler, which will determine whether the wreck project will be able to continue. Make checks payable to the GLACD, indicating that the money should be used in the "Wreck Alley L.A." project. Send checks to the GLACD, P.O. Box 1533, Beverly Hills, CA 90213.

WCSI Now Operating Out of Coral Reef Dive & Surf Center

West Coast Scuba Instructors (WCSI) is now running its operation out of the brand new Coral Reef Dive & Surf Center, located at 14161 Beach Boulevard (across from Texas Lucy's) in the city of Westminster. In its new location WCSI plans to offer the most comprehensive continuing education program and activities calendar on the West Coast, with the emphasis on safe diving and on having fun.

Upcoming events include entry level courses starting June 4 and June 22 and two advanced courses starting May 31 and June 22. Also, there is a dive master program starting May 17, a Memorial Day dive trip to Mexico May 25-28, a basic photography course starting May 15 and an assistant instructor program starting June 28.

In addition, a dive tour to Australia's Great Barrier Reef and Fiji is scheduled for January 1991 and there are monthly boat dives to Catalina as well as to the other Channel islands.

For more information on WCSI's upcoming events, contact John Land or Bruce Cannelongo at (714) 586-DIVE, or call Tony Jones at the Coral Reef Dive & Surf Center at (714) 894-DIVE.

Correction

The contact number for Jim Church's 1990 photography seminar schedule aboard the Aggressor Fleet was incorrectly listed on page 25 of the March/April '90 issue. For information on Church's seminars, the correct contact number is (800) 348-2628. ■

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JELLYFISH

From tiny critters to giant species 10 feet across, these members of Phylum Cnidaria can be found up and down the Pacific Coast.

Everybody has a favorite diving story, and mine involves a jellyfish. It didn't happen to me; in fact I wasn't even nearby when it occurred, but if my friends can be believed (a crucial "if"), it must have been a wonderful scene.

The incident took place because these diving biologists forgot one of the cardinal rules of diving, a rule as important as continuous breathing or diving with a buddy: *Look where you're going!* After an uneventful dive off San Clemente studying a sandy bottom population of sea urchins at a depth of about 70 feet, our "victims" began a slow rise to the surface. The water wasn't too clear and there was little to see after leaving the urchin field. So as the two divers, only a few feet apart, stared idly at their gauges and each other during the ascent, one of them rose up into the center of the gauzy bell of a giant jellyfish!

According to the man telling the story — the "outside" man — the effect was like someone turning down the contrast knob on the TV, and his diving buddy just sort of faded out. The "outside" guy backed off a bit, got a long view, then charged in to rescue his friend. The "inside" guy, meanwhile, tired and cold from a long study dive, suddenly found himself enveloped in loose folds of tentacles and manubrial palps. His eyes widened, his adrenaline flowed, and you can bet his breathing increased.

Filling rapidly with the exhaled air of our panicky "inside" man, and uninterested in eating anything larger than small drifting animals anyway, the jellyfish awakened, belched the flailing scientist out of its recesses, and disappeared into the murk. End of story.

But plenty of questions remained, like how big *was* that thing? How did those guys get out alive. Where did the jellyfish go? Are there more out there like it? Naturally, after a few post-dive beers, the exaggerations began in earnest. When I first heard this story (as a grad student at San Diego State 20 years ago), the beast had grown to 10 feet across. Is that possible?

Like most other West Coast jellyfish, the creature in question was inoffensive to

divers. Jellyfish, sea anemones and corals belong to the Phylum Cnidaria which contains about 9,000 mostly marine species of animals. The group takes its name from the large stinging cells, or cnidoblasts, they alone possess. "Cnido-" is a Greek prefix referring to the nettle plant, a toxic, stinging weed common to Mediterranean countries. Cnidoblasts are usually found on motile tentacles that can bend or retract toward a mouth. A coiled thread within a cnidoblast can be forcefully ejected to penetrate prey, sometimes immobilizing the victim with a poison. The mouth leads to a blind-sac cavity in which digestion of the subdued dinner takes place. Curiously, not all stinging cells sting. Some eject a shower of tiny threads that envelop the prey; some glue the victim to the tentacle.

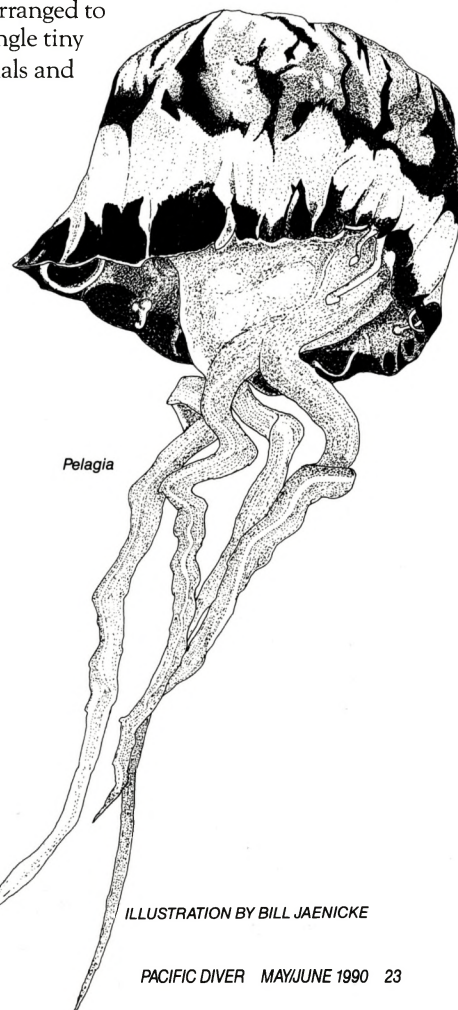
Fortunately for our divers, the giant jellyfish they encountered was a member of genus *Cyanea*, medusas that use their relatively small cnidoblasts to sting the small animals they consume. As for size, the world's record for *Cyanea* is 3.6 meters (11.8 feet) across, trailing tentacles 30 meters (98 feet) long. (Even if only moderately exaggerated, the biologists' 10-footer fell into the ranks of world-class jellyfish.)

These beautiful, slow-moving predators glide like drifting clouds through the ocean, unable to control their course or their fate. They can adjust their height in the water column, rising toward the surface at night to feed on the small fish and crustaceans that migrate there under the questionable safety of darkness. At first light the jellyfish spread their tentacles and fall to mid-depths, sweeping up any hapless stragglers on the way.

Giant *Cyanea* aren't common in our waters, but a smaller relative called *Pelagia* is. Most West Coast divers, sailors and surfers are familiar with *Pelagia*'s graceful milky-white bell with its radiating purple or reddish-brown stripes. Though smaller (about a foot across) and with shorter tentacles (five or six feet long), *Pelagia* can be an unpleasant diving companion. Its cnidoblasts are large and adapted to penetrate the skin of fish. The injected toxin interferes with the nervous system, making the fish's movement erratic and

depressing its ability to pump water over its gills. When a human brushes against the tentacles, the injected toxin causes immediate intense pain, shortness of breath, and — if the victim is sensitive to animal stings — shock. Luckily, the needles aren't long enough to penetrate wetsuits.

Perhaps the most beautiful jellyfish are the two- to six-inch *Aurelia*, delicate pastel-colored migrants that dot calm offshore waters and bays in the early fall. *Aurelia* can be recognized by the distinctive U-shaped gonads which form a four-leaf-clover pattern within the blue, lavender, or pink bells. Short tentacles trail from lobes at the animal's center. Flocks of these surface-feeding animals can be magnificent when viewed from below on a bright day, each swimming randomly with its own bell-pumping rhythm. Their cnidoblasts are arranged to entangle tiny animals and





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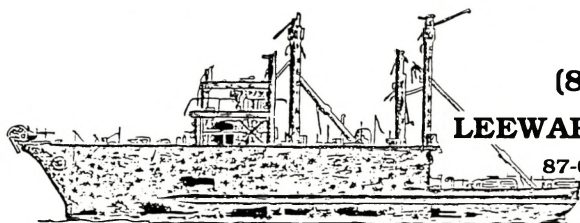
It is said that variety is the spice of life. And of course the same rule

holds true in diving. Which is why Hawaii has

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are harmless to humans — I've seen divers emerge from the ocean decoratively draped with *Aurelia* and showing no ill effects.

Like the other jellyfish mentioned, *Aurelia*'s numbers vary unpredictably from year to year. Uncertainties of wind, tide, currents, water temperature and the

LOOK CAREFULLY AT

DRIFTING PARTICLES —

MANY OF THEM WILL BE

BEAUTIFUL TRANSPARENT

MEDUSAS SMALLER THAN A

PENCIL ERASER.

availability of food all contribute to a population's success or failure. I remember seeing millions of small *Aurelia* crowded into a small corner of lower Newport Bay one day. I hadn't noticed any when I was there the week before, and on my next visit a few days later they were gone. Either they had been blown into the bay by the wind, or more likely, they had developed from larvae that had drifted in from a distant spawn.

The hardier *Pelagia* are more dependable. It is rare to sail between the mainland and Catalina or San Clemente island in the spring, summer, or fall without seeing at least a few.

Not all jellyfish around you are immediately obvious. Regular readers of this column know that I love to look closely at small things when I dive. Fortunately for us lovers of fine detail, there are always many more very small jellyfish than big ones. Try shining your light in the open water about a foot in front of your faceplate. Look carefully at the drifting particles — many of them will be beautiful transparent medusas smaller than a pencil eraser. Their tentacles will barely be visible. Like their giant cousins, they're minding their own business, drifting in the winds and currents, reeling in targets of opportunity, and enhancing the enjoyment of all divers who take the time to seek them out. ■

Dr. Tom Garrison heads the Marine Science Department at Orange Coast College, the largest undergraduate teaching department for marine science in the U.S. He holds national awards for teaching excellence from the Marine Technology Society and the Salgo-Noren Foundation, coauthored the PBS series *Oceanus*, and is the author of a new text in general oceanography soon to be published by Wadsworth.

A BUYERS GUIDE TO DIVE COMPUTERS

Looking to computerize your diving? Here's what's available for 1990.

In the beginning, there was the computer chip, and it was good. Later the computer chip was applied to diving technology, and that was even better.

Today's diving computers are basically broken down into two categories: the Computer Module, and the Integrated Computer Console. Modular computers are designed to be worn on the wrist or clipped to a regulator hose or fitted into a standard instrumentation console that also contains a modular air pressure gauge and perhaps a compass.

Integrated console computers, on the other hand, have the deco computer and the air pressure gauge integrated into a "hockey stick" shaped unit. These integrated console computers can not only provide you with computer-assisted dive profile information, but most of them can do fancy computations like calculating your breathing rate.

Following is a rundown of some of 1990's hottest diving computers. Since there's simply not enough room here to list every feature of every system, we have attempted to touch on each unit's highlights as well as list their suggested retail prices to help you in evaluating how much computer you're getting for your money.

Beuchat's Aladin Pro

The Aladin Pro is one of the only dive computers that operates continuously throughout the life span of its batteries. It is able to forecast no-decompression time and the total time required for ascent, taking into account the entire saturation and desaturation profile of the dive.

The Aladin Pro features 20 different functions and operates down to depths of 330 feet. Its logbook feature records your last nine dives indefinitely. The unit switches into the active mode automatically when you enter the water or when you touch the contacts with wet fingers, and it switches off automatically when the nitrogen partial pressure in all your tissues has adapted to the ambient atmospheric pressure. Battery replacement must be done by an authorized dealer, but based on an average of 100 dives a year, the battery will last for approximately five years.

Incorporating both visual and acoustic hazard warning systems, if decompression is incomplete, the Aladin Pro also displays

DIVING COMPUTERS ARE
BROKEN DOWN INTO TWO
CATEGORIES: THE COMPUTER
MODULE AND THE
INTEGRATED COMPUTER
CONSOLE.

the number of the tissue involved, which is invaluable information in the treatment of decompression sickness.

Suggested retail price: \$625 for the wrist model; \$750 for the standard console.

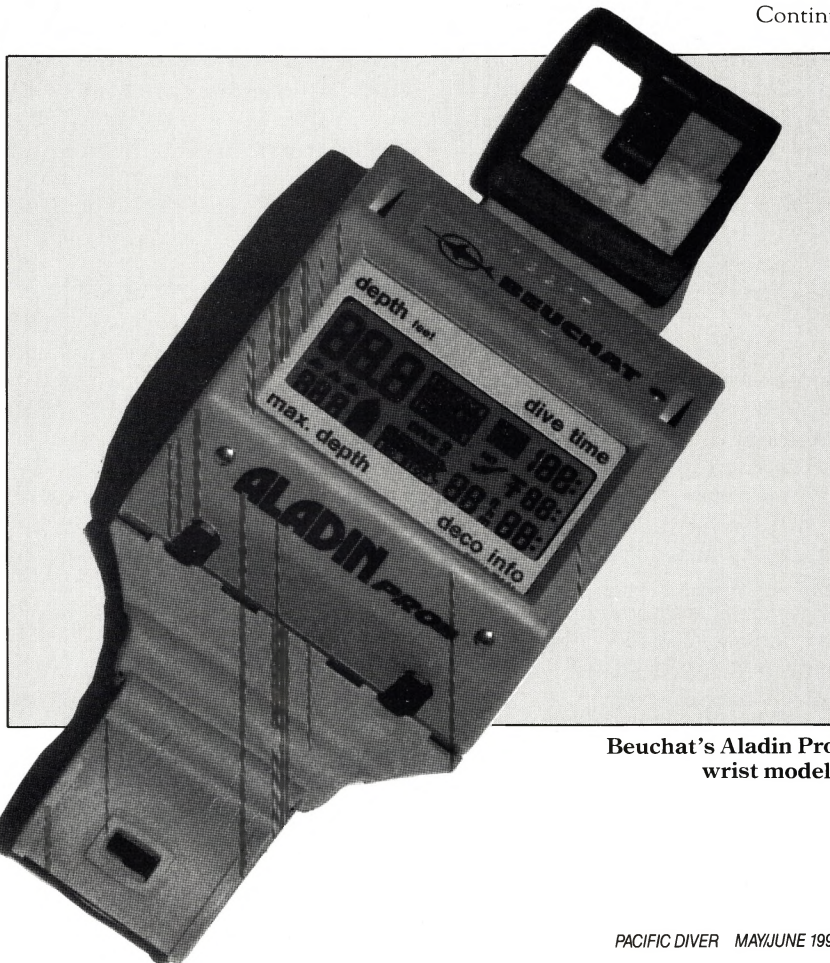
Dacor's Micro Brain

The Micro Brain is a compact diving computer that can be worn on the wrist, fastened onto a hose or incorporated into a standard console. It functions accurately up to 6,500 feet above sea level, and its maximum depth range is 130 feet. The battery is consumer replaceable, and although the unit is designed for no-decompression diving, it can provide enough information to get you out of an accidental decompression situation. The unit is automatically activated when immersed in water and features an ascent rate warning.

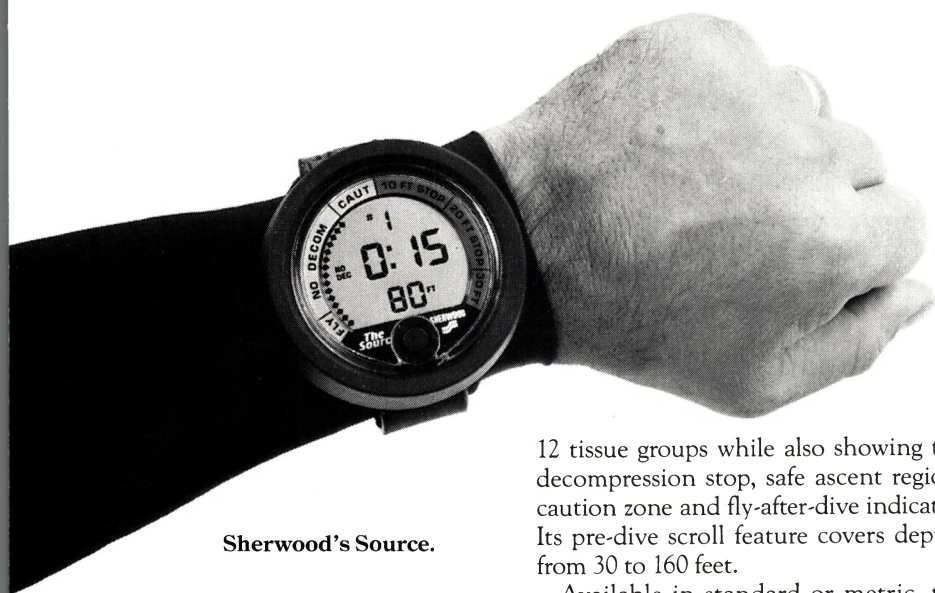
The Micro Brain will store up to six dives for 48 hours for logbook purposes, and scrolls no-deco-stop dive profiles between 51 and 130 feet.

Suggested retail price: \$329.95 for the wrist or clip-on model; \$554.90 for the standard console.

Continued



Beuchat's Aladin Pro wrist model.



Sherwood's Source.

Dacor's Micro Brain Pro Plus

For no-decompression and decompression diving on both multi-level and repetitive dives, the Pro Plus offers about two dozen different functions, from basic dive data to diver status information. Its logbook will record the last six dives for 48 hours and the last three dives indefinitely. In addition, it will store the maximum depth achieved as well as your total number of dives and dive hours up to 9999 dives and 9999 hours. One of the outstanding features of the Pro Plus is its rechargeable power source. Freedom from batteries at last!

Suggested retail price: \$609.95 for the wrist and clip-on models; \$719.90 for the standard console.

Sherwood's Sigmatech II

Manufactured for Sherwood by Orca Industries, the Sigmatech II updates information on the nitrogen absorption level of 12 body tissue groups. It provides four modes of dive information: the Diver Mode, which displays remaining no-decompression time, depth and elapsed time; the Surface Mode, which scrolls remaining no-decompression time from 30 to 130 feet; the Surface Log, which displays information from the previous dive; and the Decompression Mode, which displays a flashing light and an "ascend" message.

Its three replaceable lithium power cells offer more than 750 hours of continuous operation. It is also designed to mate with Sherwood's pressure gauge.

Suggested retail price: \$450.

Sherwood's Source

Manufactured by Pelagic Pressure Instruments for Sherwood, the Source is the size of a standard depth gauge. Extremely easy to read, its tissue-loading bar graph depicts nitrogen absorption by

12 tissue groups while also showing the decompression stop, safe ascent region, caution zone and fly-after-dive indicator. Its pre-dive scroll feature covers depths from 30 to 160 feet.

Available in standard or metric, the Source can either be worn on the wrist or incorporated into a standard console boot.

Suggested retail price: \$450.

Orca's Edge

This is the computer that started it all. The Edge is a large, heavy, nine-volt battery-powered aluminum-housed computer with a user-activated on/off switch (you have to manually flip a switch on the surface). The Edge can be worn on the wrist, or sleeved in a vinyl holster attached to the high pressure hose. The Edge offers few frills: no ascent rate alarm or logbook recall, but it does offer a temperature display and an excellent graphic display of nitrogen intake along with digital data.

While many newer computers on the market today will exceed the 160-foot depth limitations set by the Edge, it is still considered by many to be the diving computer by which all other models are judged.

Suggested retail price: \$715.

Orca's Skinny Dipper Mark II

The Mark II is the successor of the Skinny Dipper with several important changes, most significantly of which is the fact that this unit is not prone to leakage like the original.

Basically, the user-activated Mark II is a streamlined version of the Edge without the graphic display and heavy aluminum housing. Made of space-age plastic, the lightweight Mark II is powered by three consumer-replaceable three-volt lithium batteries.

The Mark II is available with a vinyl sleeve with which to mount the unit on a high pressure hose. Unlike the Edge, the Mark II incorporates an ascent alarm that is activated when you ascend too rapidly.

Suggested retail: \$425.

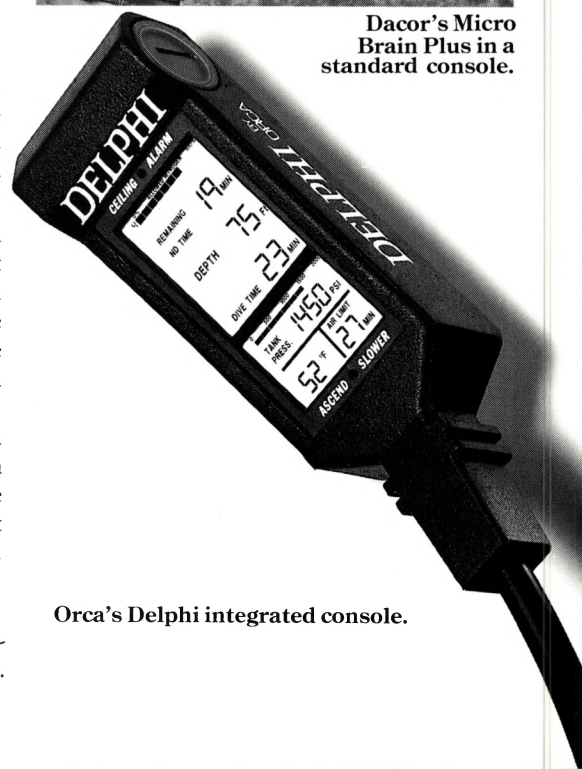
Orca's Delphi

The Delphi is Orca Industries' long-awaited air-integrated computer console.

Roughly the size of an average three-gauge console, the Delphi has a standard operating range of 200 feet and features a water temperature gauge in addition to decompression and no-decompression diving



Dacor's Micro Brain Plus in a standard console.



Orca's Delphi integrated console.

information. The Delphi borrows a little bit from the Edge's graphics with a digital bar indicating nitrogen absorption percentages in addition to its standard digital display.

The air supply end of the computer features a graphic bar indicating remaining pressure along with a digital air supply limit indicator. A rate of ascent warning light is included along with a countdown indicator notating safe flying time. A 300-foot "Pro" model is available for professional divers.

Suggested retail price: \$649.

Suunto's SME-ML

Available in wrist mount or standard console models, the Suunto SME-ML offers 17 separate operating functions. Besides the standard functions, it also features a "Safe to Fly" indicator, performs decompression and no-decompression calculations, offers a rate of ascent warning and records your dive profile. The unit is powered by two silver oxide batteries that will accommodate approximately 100 logged dives.

Suggest retail price: \$500 for the wrist model.

Tekna's Computek

The Computek is a fully integrated console computer, incorporating air supply and dive profile information. Unlike other



Orca's 2nd generation Skinny Dipper Mark II.

computers, the Computek utilizes "Pictographic" technology for its display (if you like video games, this is the dive computer for you). Rather than just indicating data through digital displays and graphs, the Computek features the image of a human (which fills up according to nitrogen absorption levels), and a tank (which

decreases as air is utilized) and a small airplane (safe-to-fly). Tekna calls this effect the "snapshot" data display.

Like other computers, the Computek provides decompression and no-decompression multi-level diving information. One major difference, however, is that it features a self-contained low-light electro-luminescent panel which allows you to read the instruments in darker diving conditions.

Suggested retail price: \$650.

Oceanic's Datamax Sport

The Datamax Sport is the same size as a standard depth gauge and can be worn on the wrist or fitted into a console. The unit accommodates decompression and no-decompression diving and allows you to recall up to seven dives. A small user-activated button turns the unit on; however, the battery is not consumer accessible.

The Sport also features an ascent rate alarm. An interesting feature of the Datamax Sport is that the circular rim of the gauge denotes no-decompression limits, a caution zone and decompression limits. A corresponding graphics display moves along these indicators to visually allow you to see where you are with a quick glance.

Suggest retail price: \$492 for the Nav-



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Dacor's Micro Brain wrist model.

Con model; \$366 for the wrist model;
\$354 for the modular model.

Oceanic's Datamaster Sport S

This is Oceanic's newest pressure
integrated console computer. Utilizing the
Rogers and Powell tables, the Datamaster
Sport is less conservative than its pre-
decessor, the now discontinued Datamaster
II. It will perform decompression and no-
decompression calculations and also
features an ascent rate alarm.

Suggest retail price: \$651.

U.S. Divers' Monitor I

The Monitor I factors decompression
calculations to a maximum depth of 300
feet. It is also designed for altitude diving
as high as 13,200 feet. Operating on the
theory of the Buhlmann 6 Tissue Tables,
this unit is very liberal when calculating
multi-level dives. Like the Dacor Micro
Brains and the Beuchat Aladin Pro, the
Monitor I is water-activated. The battery
compartment is sealed, but the computer
is said to be able to operate for as long as
five years.

Suggested retail price: \$530 for the wrist
model; \$650 for the standard console.

Diving Computer Safety

Diving computers are astonishing pieces
of equipment that will do much to im-
prove the quality of your diving, but dive
computers cannot be used as a substitute
for diver intelligence. With that in mind,
consider the following computer diving
safety tips.

- With or without a computer, a shallow
water safety stop at 10 to 15 feet for at least
three minutes should be made on all dives,
especially if you're going deeper than 60
feet.

- All diving should be done on a deep
to shallow basis, with the final dives of the
day being the shallowest.

- Computers should not be used for
multiple decompression diving by recrea-
tional divers.

- On a long-range trip, don't turn your
computer off, even after 12 hours on the
surface; many models will still calculate
individual nitrogen time for 48-hour
periods and longer. Certain units go into
a "sleep" mode of their own, but retain
nitrogen information.

- Computer depth and time limits, like
the tables, are not to be pushed; doing so
is to invite trouble.

- Contingencies for a dead computer
are good to have, especially if you are on a
month-long vacation out in the sticks. At
the end of every dive write down the
scrolled time and depth.

U.S. Divers' Monitor II

Almost identical to its cousin, the
Monitor I, the Monitor II utilizes a visual
and audio alarm system. Ascend too fast
and the Monitor II beeps in protest.
Although most divers would not dare to
venture into the 300-foot depth zone, the
Monitor II is capable of generating data at
such depths.

Suggested retail price: \$630 for the wrist
model; \$750 for the standard console.

U.S. Divers' Datascan III

The Datascan III integrated computer
console is based upon the Rogers and
Powell tables, incorporating six different
tissue groups to the Navy's three. Because
of this the Datascan III will operate down
to 165 feet as a no-decompression com-
puter, to 249 feet as a depth gauge, and it
is more generous in its repetitive bottom
time allowances. The Datascan III has no
rate of ascent warning but will operate at
altitudes up to 2,000 feet. Factory-sealed
lithium cells provide up to 6,000 hours of
continuous use.

Suggested retail price: \$725.

With all the choices of computers
available to sport divers today, there's
surely a computer sitting out on some dive
store shelf with your name on it. If used
safely, a diving computer can open up a
whole new world of diving. It's tomorrow's
technology, available to sport divers today.

IN THE WRONG PLACE, AT THE WRONG TIME

By Chris Huss, Seattle, Washington

Slipping the drysuit over my head, I heard a muffled voice say, "You're pity bave to mump in air." I pulled my neck seal down over my nose and saw an attractive hatchery worker standing there smiling at me.

"Huh?" I said in my usual articulate manner.

"I said, 'You're pretty brave to jump in there. Those chum salmon have really nasty incisors. Didn't you see the waders hanging inside the office? They're all chewed up.'"

I didn't see any chewed up waders hanging inside the office. But even if I had, it

My plan was simple: enter the water downstream, then slowly move upstream, corralling the salmon against the metal grating, thus increasing my chances of getting some good shots. I had used this plan before and it usually worked pretty good, enabling me to get a few good shots before all the fish finally broke out and swam past me, at which time I would simply turn and repeat the procedure on the downstream end of the pen.

I entered the water in the deep end and started upstream, trying to remain calm and breathe as slowly as possible. But in spite of my slowed breathing, what few bubbles I was exhaling sent the fish

the other oncoming fish, which turned and smashed into still other oncoming fish, and so on, until all 1,700 irritated salmon were heading directly toward me. At the same time.

Faced with a wall of incisor teeth, I rolled up into a ball and hit the bottom. *Whoosh! Whoosh! Whoosh!* They charged over me. I felt like a VW being passed by a fleet of semi trucks.

At about this time I figured it was time to rethink my strategy. Okay, the corral method was too unpredictable. No problem. New idea: I would just sit there on the bottom and let the fish come to me.

So I sat there waiting. And waiting. Finally a few wandered up to me, then a few more. So I raised my camera, looked through the viewfinder and reached up for the shutter button.

But wait! All of a sudden all the salmon made a collective decision that they wanted to be right where I was. The sky



◀ **I was faced with a wall of incisor teeth as 1,700 irritated salmon charged directly at me.**

was too late now. I was already committed to jumping into this holding pen so I could get some salmon shots for the book I was working on. Unfortunately, there was no turning back.

The holding pen I was about to enter (so-named because it "holds" the salmon until they are ripe for spawning) is about 200 feet long, eight feet wide and slopes from two feet deep in the upstream end to eight feet deep in the downstream end. Water is pumped through the pen on the upstream end to simulate river flow conditions. The salmon tend to hang out at the upstream end, following their genetic urge to return home to spawn.

smashing into each other and against the upstream grating.

"It's working," I thought to myself. "They're heading upstream. Soon they'll bunch up so bad they'll turn and try to get past me, and then I'll have my chance."

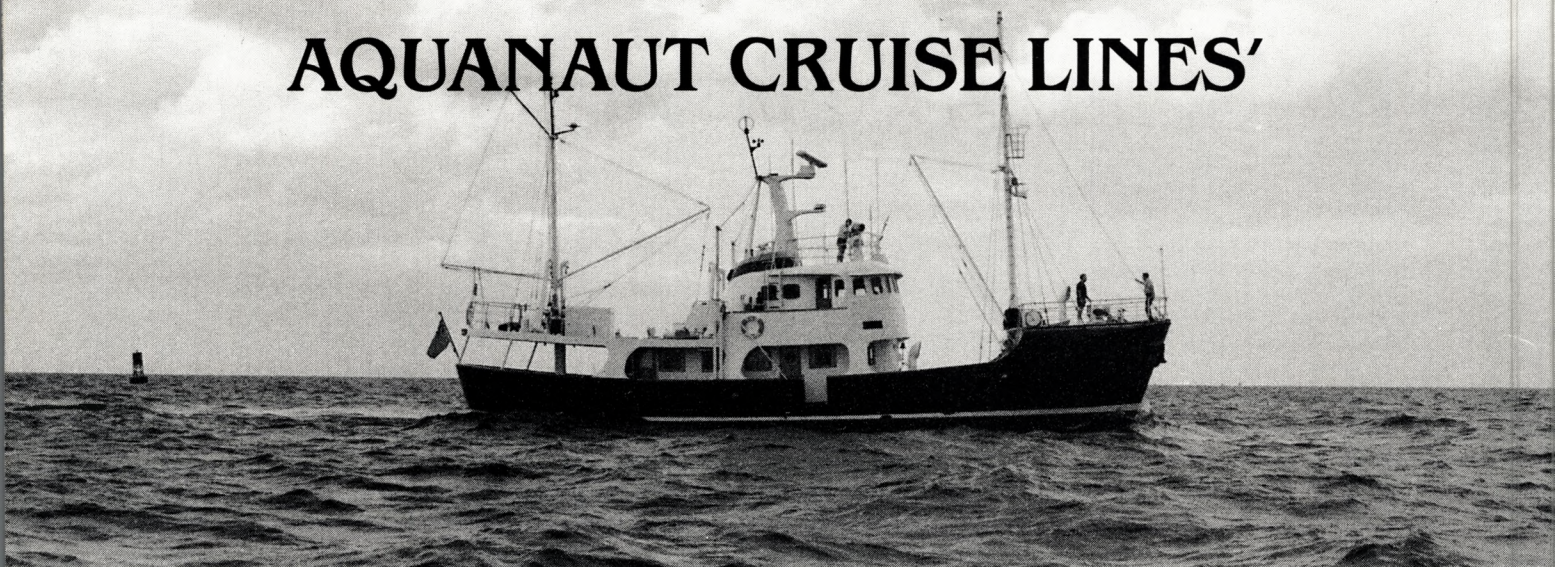
Now 1,700 fish being compressed into the shallow end of a holding pen can create quite a fish explosion when they finally decide they've had enough. Which is exactly what happened. The fish pressed up against the upstream grating, apparently tired of being smashed up against the bars, turned and charged downstream, bashing into the oncoming fish heading upstream, which turned and smashed into

went dark as fish swarmed over my head and bumped up against me. I slid into a prone position on the bottom, but somehow the fish still managed to get beneath me. They wove under my arms, over my camera, between my legs. They were calm, but a sudden move, one nervous exhalation, and these snapping critters could explode again. Only this time, they wouldn't be smashing into the walls, floor and each other. They would be smashing into me. With teeth!

Exercising a level of calm that surprised even me, I managed to get out of the water without mishap. But from now on, when I get into the water with these pushy creatures, I'm wearing a chain mail shark suit, just in case! ■

Do you have something in your logbook that you'd like to share with other divers? If so, send it to LOGBOOK, c/o PACIFIC DIVER, P.O. Box 6218, Huntington Beach, CA 92615. A self-addressed, stamped envelope must be included to ensure the return of any photographs. A \$25 award will be given for any stories selected for publication.

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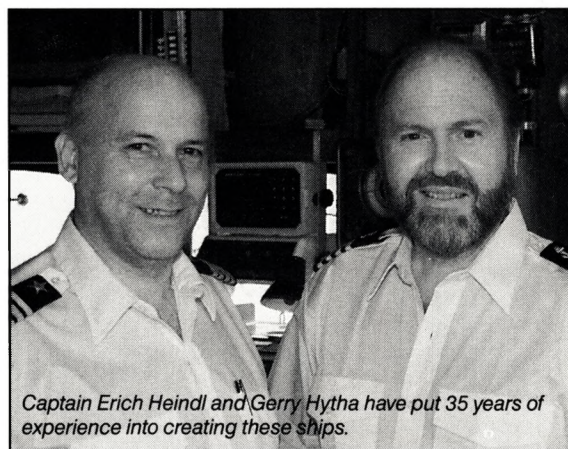
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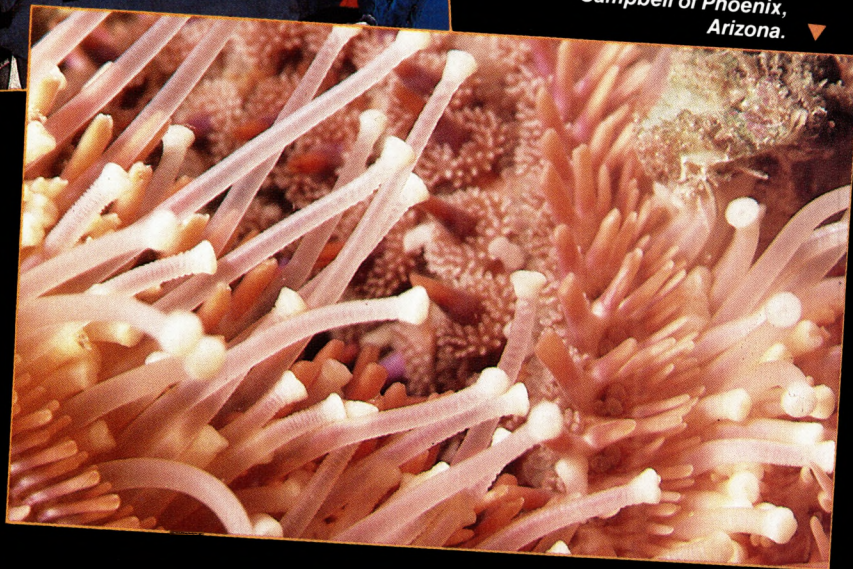
AQUANAUT DIVE / CRUISES



▲ Lucky lobster hunters show off their catch on the ride home from the outer islands aboard the dive boat Truth. Photo by Lee Sams of Seal Beach, California.

A macro shot of the underside of a starfish arm, showing the creature's "feet," taken off San Clemente Island. Photo by Marty Campbell of Phoenix, Arizona. ▼

▼ A South Pacific seascape, with virtually unlimited visibility and the dazzling colors of a Philippines reef. Photo by Ken Howard of San Anselmo, California.



▲ Who's feeding who? Susi Yoho and a granddaddy eel share an anchovy on the wreck of the Mahi off Oahu, Hawaii. Photo by Dan Butler of Honolulu, Hawaii.



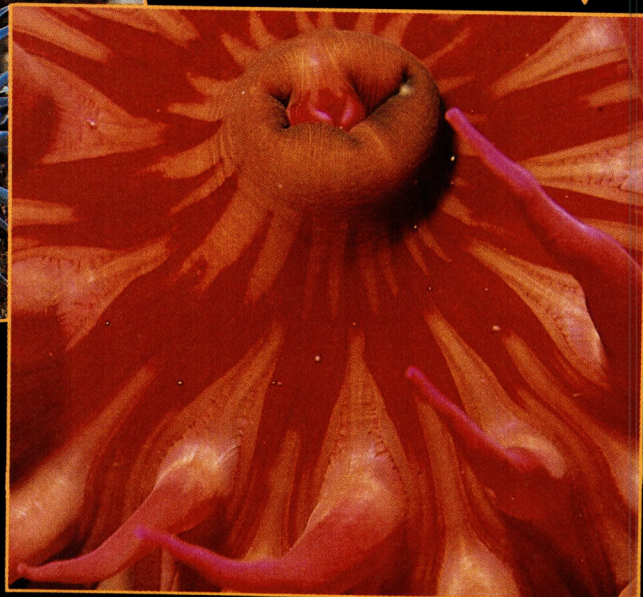
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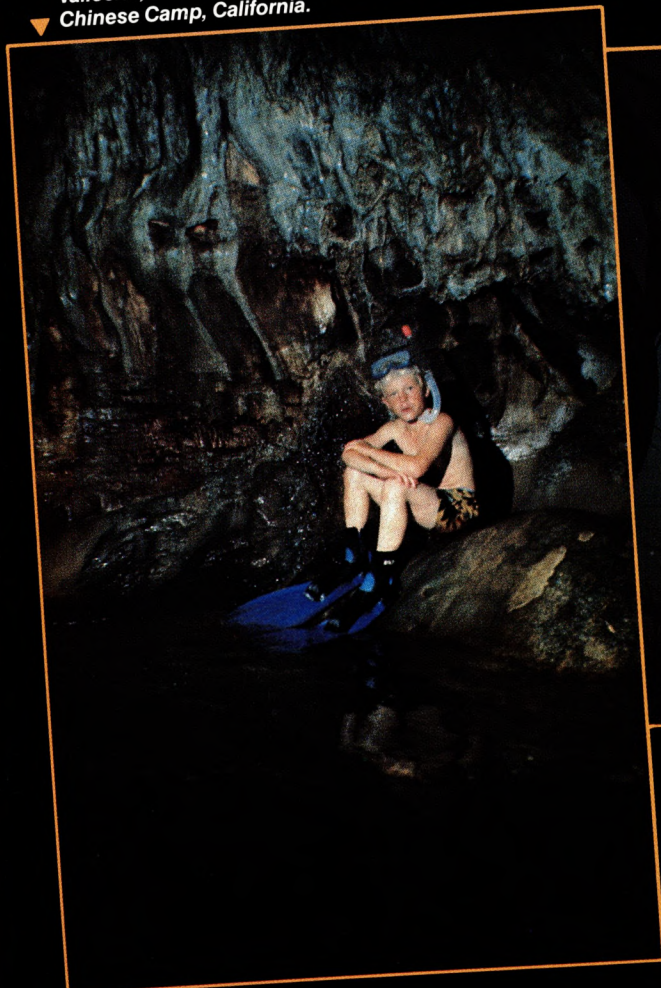
PACIFIC DIVER

The psychedelic colors of a rose anemone brighten the waters off Santa Cruz Island. Photo by Ron Cleary of Huntington Beach, California. ▼



▲ This delicate anemone shot was captured on one of the support beams of Phillips Petroleum's Platform Hogan, located three miles off the coast of Carpinteria, California. Photo by Mary Lou Martin of Houston, Texas.

Johnny Bucher rests between dives at Natural Bridges, a freshwater cave located near Vallecito, California. Photo by Paul Bucher of Chinese Camp, California. ▼



▲ Divers descend through the kelp canopy at the Pinnacles off the coast of Monterey. Photo by Michael Preovolos of Vallejo, California.



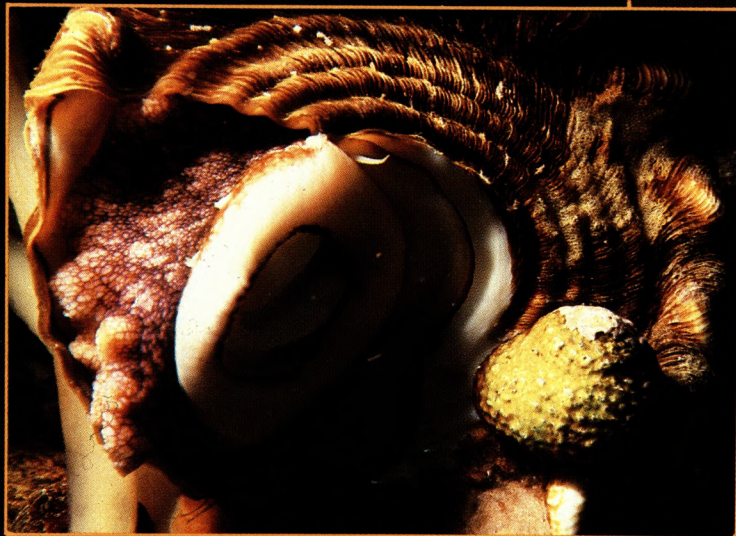
you've taken photographs that you feel represent the diving lifestyle, and you'd like to share them with other divers, we invite you to submit them to PACIFIC DIVER for possible publication.

PICTORIAL

A California original: this beautiful kelp forest can be found off the coast of La Jolla. Photo by Bob Gladden of San Diego, California. ▼



The underside of a wavy top snail with attached kelp snail, taken at Long Point, Catalina Island. Photo by ▼ 15-year-old Josh Burnam of Hidden Hills, California.

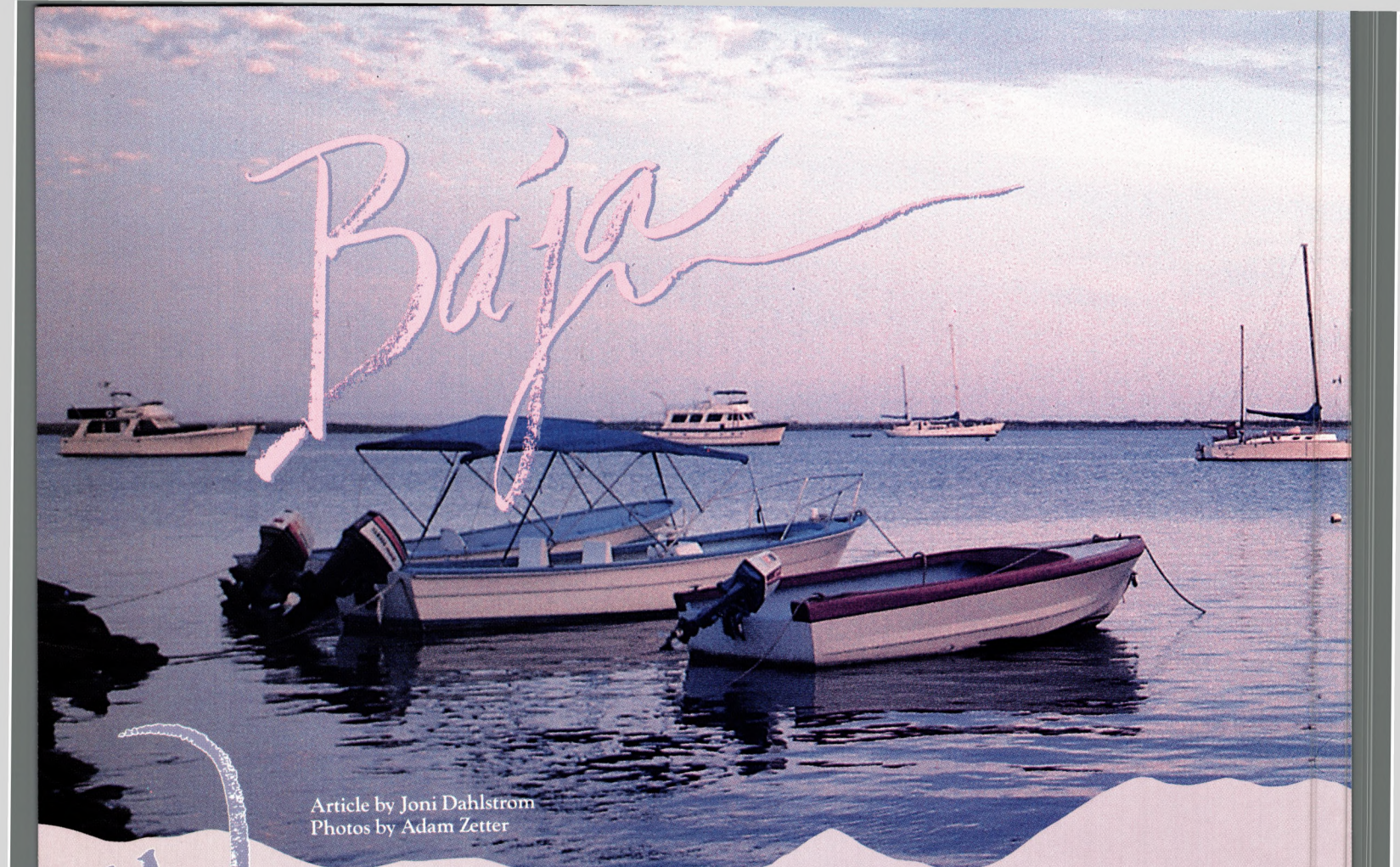


Displaying just one of the vibrant colors of the undersea world, this green anemone was shot in the waters off Santa Barbara Island. Photo by Jim Knowlton of Santa Barbara, California. ▼



▲ A school of yellowtail goatfish move in to investigate divers off the coast of Oahu, Hawaii. Photo by Glenn Cummings of Kaneohe, Hawaii.

If your photo is selected, it will appear on these pages with a photo credit (\$25 will be awarded for selected photographs). To have your photos considered for publication, send your color transparencies to Editor, PACIFIC DIVER Magazine, P.O. Box 6218, Huntington Beach, CA 92615, with a sentence or two describing each shot. Photos must be submitted with a self-addressed stamped envelope to ensure their return.



Baja

Article by Joni Dahlstrom
Photos by Adam Zetter

Wearing a floppy straw hat I relax in the shallows just off a white-sand beach, the crystal blue water sloshing about my waist. The barren coastline stretches in both directions, an endless expanse of sand broken by intermittent rock outcroppings that jut out into the water, forming reef homes for the tropical fish. It's 11 a.m. and already hotter than sin, but the water is almost as cool as the beer in my hand. Which is why I, being a sensible person, am sitting here splashing my feet, doing absolutely nothing.

Not that there isn't plenty to do if I had a mind to get motivated. After all, at dawn I was in a panga trolling for dorado on the way out to the dive site. The morning dive was great, and to hear the panga fisherman tell it there's a great wreck just a few miles up the coast that I'm planning on getting to later in the afternoon. But for now, the sun is shining and there are all these interesting little fish swimming around in the water where I'm sitting. So what's the hurry?

Baja California. Thousands of miles of coastline offering some of the most diverse diving in the world. And some great fishing and camping too. Plus, there are

lots of good places to just sit and enjoy the passage of time.

Along the northern Pacific coast there is classic cold water diving with abundant game and shellfish. Head farther south and the water gets warmer, the reefs are untouched, and the bright tropical fish begin to appear. Then cut over to the Sea of Cortez and you'll find reefs and islands and clear water teeming with giant mantas, schooling hammerheads, whale sharks, eels, yellowtail — the list goes on and on.

For a diver, Baja is nothing short of paradise, with so much to see, and so much to do. To fully appreciate even one small piece of Baja diving would take the better part of a month, and to get to know Baja well could take many years.

There's no better way to experience Baja and at the same time enjoy some great diving than by exploring the peninsula by car. Instead of the traditional dive vacations where you climb onto a live-aboard or check into one hotel for an entire week, for a change of pace consider a trip to Baja that, while it may not afford you as much diving as other vacation options, will enable you to get some good diving in while at the same time give you a chance to really get to know Baja.

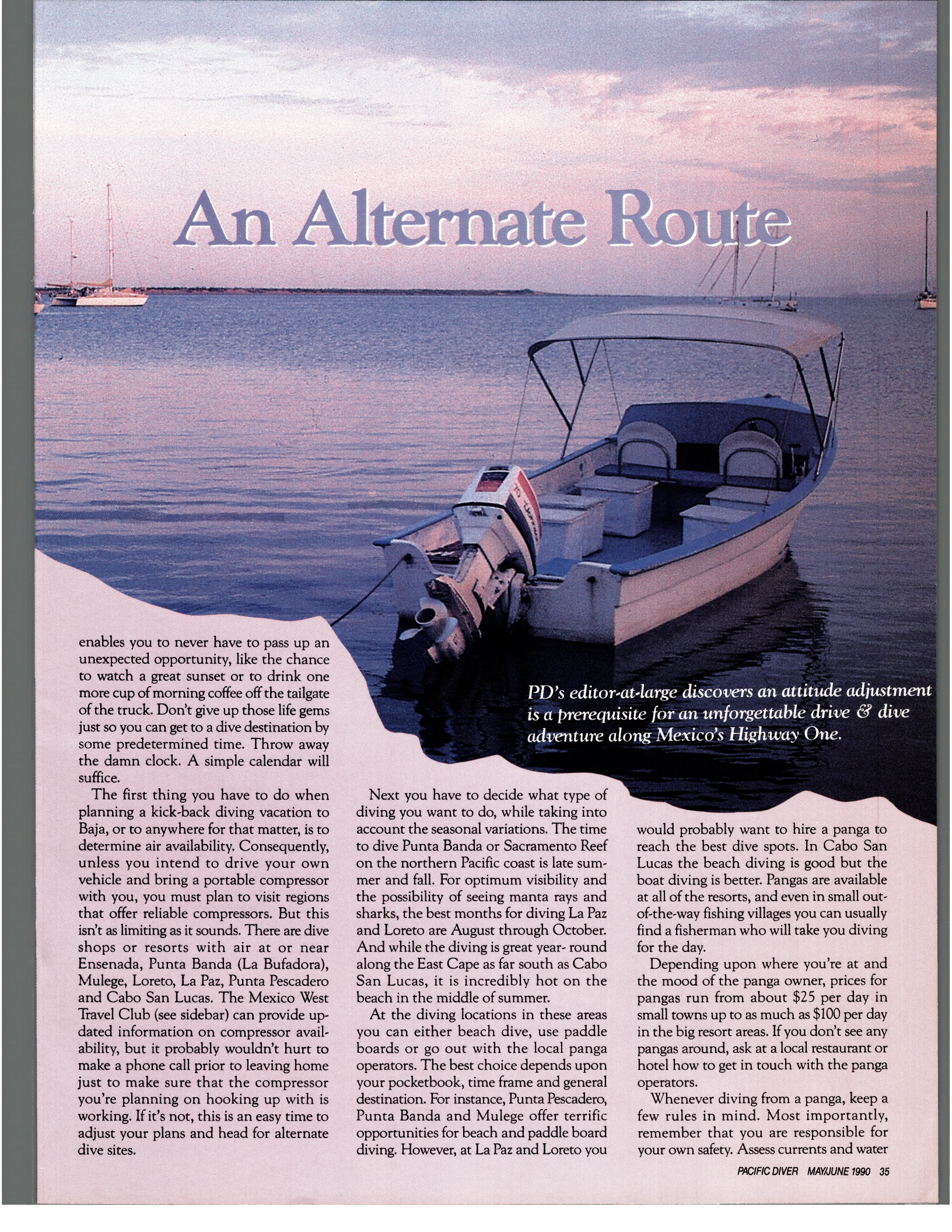
I am an avid diver, and I truly love diving Baja, but you know, when all is said and done, what I always remember most about my Baja trips is the time spent watching the sun rise from a small boat or sitting around a campfire at night, or lounging on the veranda of a seaside hotel drinking Mexican beer with friends. It's those quiet times that linger in my mind.

Following are a few suggestions for putting together a plan for visiting Baja with emphasis on enjoying the country, the people, the diving and those quiet times. Such a plan can work for a tour lasting five days or five weeks, because it relies on your attitude more than on your scheduling skill. And the best news is, a trip like this generally costs a lot less than a traditional packaged dive holiday. So let's call it the Independent Baja Dive Adventurer's vacation package, and let's get going.

PLANNING TO KICK BACK

As a Baja Dive Adventurer you travel with a minimal itinerary. You've done some research, of course, but you recognize that your trip can't be planned down to the minute. Therefore, you have built enough flexibility into the plan so that should one option turn sour, you can easily move on to the next without having a nervous breakdown. Such flexibility also

An Alternate Route



enables you to never have to pass up an unexpected opportunity, like the chance to watch a great sunset or to drink one more cup of morning coffee off the tailgate of the truck. Don't give up those life gems just so you can get to a dive destination by some predetermined time. Throw away the damn clock. A simple calendar will suffice.

The first thing you have to do when planning a kick-back diving vacation to Baja, or to anywhere for that matter, is to determine air availability. Consequently, unless you intend to drive your own vehicle and bring a portable compressor with you, you must plan to visit regions that offer reliable compressors. But this isn't as limiting as it sounds. There are dive shops or resorts with air at or near Ensenada, Punta Banda (La Bufadora), Mulege, Loreto, La Paz, Punta Pescadero and Cabo San Lucas. The Mexico West Travel Club (see sidebar) can provide updated information on compressor availability, but it probably wouldn't hurt to make a phone call prior to leaving home just to make sure that the compressor you're planning on hooking up with is working. If it's not, this is an easy time to adjust your plans and head for alternate dive sites.

Next you have to decide what type of diving you want to do, while taking into account the seasonal variations. The time to dive Punta Banda or Sacramento Reef on the northern Pacific coast is late summer and fall. For optimum visibility and the possibility of seeing manta rays and sharks, the best months for diving La Paz and Loreto are August through October. And while the diving is great year-round along the East Cape as far south as Cabo San Lucas, it is incredibly hot on the beach in the middle of summer.

At the diving locations in these areas you can either beach dive, use paddle boards or go out with the local panga operators. The best choice depends upon your pocketbook, time frame and general destination. For instance, Punta Pescadero, Punta Banda and Mulege offer terrific opportunities for beach and paddle board diving. However, at La Paz and Loreto you

PD's editor-at-large discovers an attitude adjustment is a prerequisite for an unforgettable drive & dive adventure along Mexico's Highway One.

would probably want to hire a panga to reach the best dive spots. In Cabo San Lucas the beach diving is good but the boat diving is better. Pangas are available at all of the resorts, and even in small out-of-the-way fishing villages you can usually find a fisherman who will take you diving for the day.

Depending upon where you're at and the mood of the panga owner, prices for pangas run from about \$25 per day in small towns up to as much as \$100 per day in the big resort areas. If you don't see any pangas around, ask at a local restaurant or hotel how to get in touch with the panga operators.

Whenever diving from a panga, keep a few rules in mind. Most importantly, remember that you are responsible for your own safety. Assess currents and water

Essentials for a Baja Dive Adventure

Proper papers are a must for trips to Baja. Admittedly, it is very easy to take these paperwork requirements for granted because nine times out of 10 you won't get asked for them. But the day an official does ask to see your fishing license or your tourist card you had better have it handy. For your own peace of mind, make sure your permits are in order.

- You must have Mexican auto insurance to drive in Mexico. If you get in an accident without it you stand a good chance of going to jail until responsibility for the accident is determined and damages have been paid. Insurance can be purchased by the day, week or month from roadside insurance companies located close to the border. They operate 24 hours a day from drive-through windows.

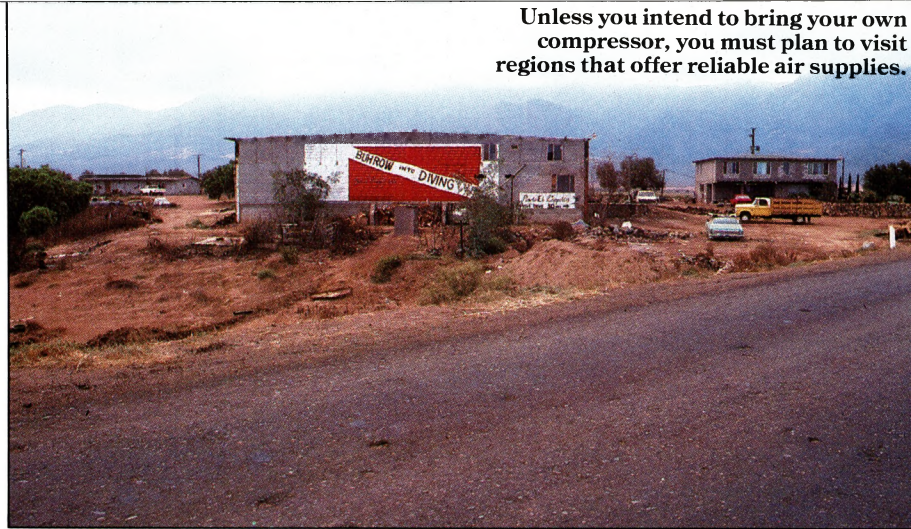
- Tourist cards are necessary when traveling farther than 60 miles into Baja, which is basically beyond Ensenada. The cards are available at most auto insurance offices or from travel agents, AAA, or airlines that serve Mexico. There is no fee for the card; just fill it out and carry it with you.

- Fishing licenses are required for divers who take game. They can be purchased at San Diego fishing tackle stores and at the Mexican Department of Fisheries which is open 8 a.m. to 2 p.m., Monday through Friday, 1012 2nd Ave., Suite 605, San Diego. The phone number there is (619) 233-6956.

Mexico West's Baja Fun Club can provide travelers invaluable assistance in pulling together the details for a Baja adventure. The club sells discounted Mexican auto insurance and provides tourist cards and fishing licenses. It is also a good source of information on any other documents or permits you may need on your trip, and can even offer up-to-date road condition information and listings of hotels and resorts. Club membership is \$40 per year, which is more than made up for in the savings on car insurance and hotel discounts. For more information call (619) 690-1505, or write to 223 Via de San Ysidro, San Ysidro, CA 92073.

conditions. No matter what the panga operator says, if it doesn't look safe, don't go.

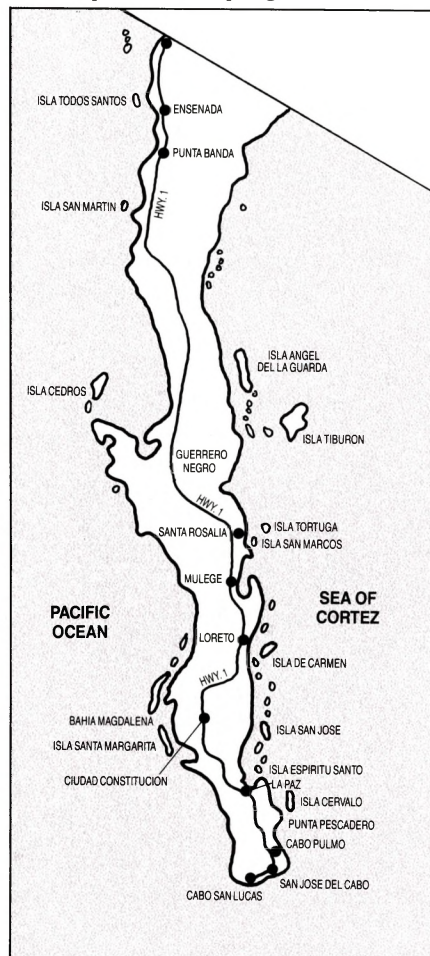
Also, be aware that pangas will not venture far from shore unless they go in convoy. For example, it's unlikely that a



lone panga operator will be willing to take you out to the El Bajo seamount near La Paz unless he's accompanied by another boat. And unless you can find divers to fill that other boat, you will be responsible for paying for both of them.

FREEDOM ON WHEELS

By flying to Loreto, La Paz or Cabo San Lucas you can reach the prime southern dive sites on vacation trips as short as only a few days. Rental cars are available in the major towns (prices are comparable to what you'll find stateside) which will give you the freedom to move around to the various dive sites and diving hotels where the compressors and pangas are available.



Unless you intend to bring your own compressor, you must plan to visit regions that offer reliable air supplies.

Of course, if time permits, the best way to explore Baja is by personal vehicle. A drive down Highway 1 is truly a fantastic voyage, beginning on the grassy Pacific coastline, then passing through the dry hot desert in the interior of the peninsula to Guerrero Negro and the gray whale calving grounds of Scammon's Lagoon. From there the highway crosses the desert to Santa Rosalia on the Sea of Cortez side, runs along the mountains overlooking the water through Mulege and Loreto, turns back into the interior through Ciudad Constitucion, then veers once again to the Sea of Cortez and La Paz. From La Paz it's a relatively short trip through green mountains to Cabo San Lucas at the tip of the peninsula.

There are dozens of side trips you can take on this long drive down the peninsula. Ideally, you'd carry a few full tanks along with you, and when you hit a likely looking piece of coastline, pull over and go diving. A trip like this could take an entire winter. Or, if you're in a hurry to get to Cabo San Lucas, driving straight through from downtown San Diego will get you there in about 25 hours.

There are a few rules for driving in Baja. For example, carry spare tires, fan belts, hoses and a full gas can. Don't drive at night because there is livestock on the roads and the truck drivers are insane. Go slow; the hazards are poorly marked.

WHERE TO STAY, WHAT TO BRING

On your journey, you can stay either in motels or camp on the public beaches (*playa publica* in Spanish). South of Ensenada there are few formal campgrounds with the exception of those at Loreto and Rancho Buena Vista down on the East Cape. The campgrounds with hot showers and toilets are relatively expensive and about half the time the facilities haven't been completed, or if they have they don't work. So rather than looking for the Mexican equivalent of a KOA, you'd do just as well to travel self-contained and stay on the beach. You can

camp on public beaches free, or sometimes for the minimal charge of \$5 or less. It's a pretty loose fee system: if a guy comes along and collects money, pay him; if nobody comes, you stay for free.

For camping gear, bring some shade with you in the form of a cabana, an enclosed tent for sleeping without getting bit by bugs, a light sleeping bag, and a table and folding chairs. You can eat in the local restaurants if you stay near towns, or bring a camp stove and cooking gear. Beans, rice, beer and canned food are readily available but may be expensive. Ice is tough, but not impossible, to come by. In the towns that have compressors there are usually places to buy ice.

Also, no matter where you plan on staying or how you plan to get there, bring items like sunscreen, beach sandals and hats. In the tourist towns all these items sell at tourist prices. They are much cheaper to buy in the United States.

Of course, diving gear is your most important consideration. Bring your own regulator. Regulators are in short supply, even at the resorts. You should also bring your own BC, fins and mask. Weight belts are available at the resorts, but if you're traveling by car and can handle the weight, bring your own along with you.

If you're driving, try to bring two tanks for each person, and top them off whenever you get a chance.

And above all, get into the right frame of mind for traveling in Baja. You can get stuck waiting all day for a store to open. Or for the panga operator to arrive. Or for the gas truck to show up at the Pemex station. Or for the vendor at the corner stand to make up two taquitos. Don't get stressed out; this is simply how it is. As they say, expand and include it. Have yourself a cold beer; that's one item that is never in short supply.

As you can see, a dive trip of this nature is a bit less organized than those where the dive master meets everybody at the airport and drives them to the dock to jump aboard a comfortable live-aboard dive boat. Clearly, by going the Independent Baja Dive Adventurer route, diving won't be a matter of just jumping off the deck of a boat. Instead, it will involve going to dive stores to get tanks filled, talking to locals to find panga operators, tracking down a restaurant that's open after a day in the water. On a dive trip like this you'll be lucky to get in two dives a day. In fact, sometimes you'll be lucky to get in one dive a day.

But the good part is, while bopping all over town chasing down a panga operator in the local cantina or grabbing a burrito while waiting for your tanks to get filled,



Even in small out-of-the-way fishing villages you can usually find a fisherman who will take you diving for the day in his panga.

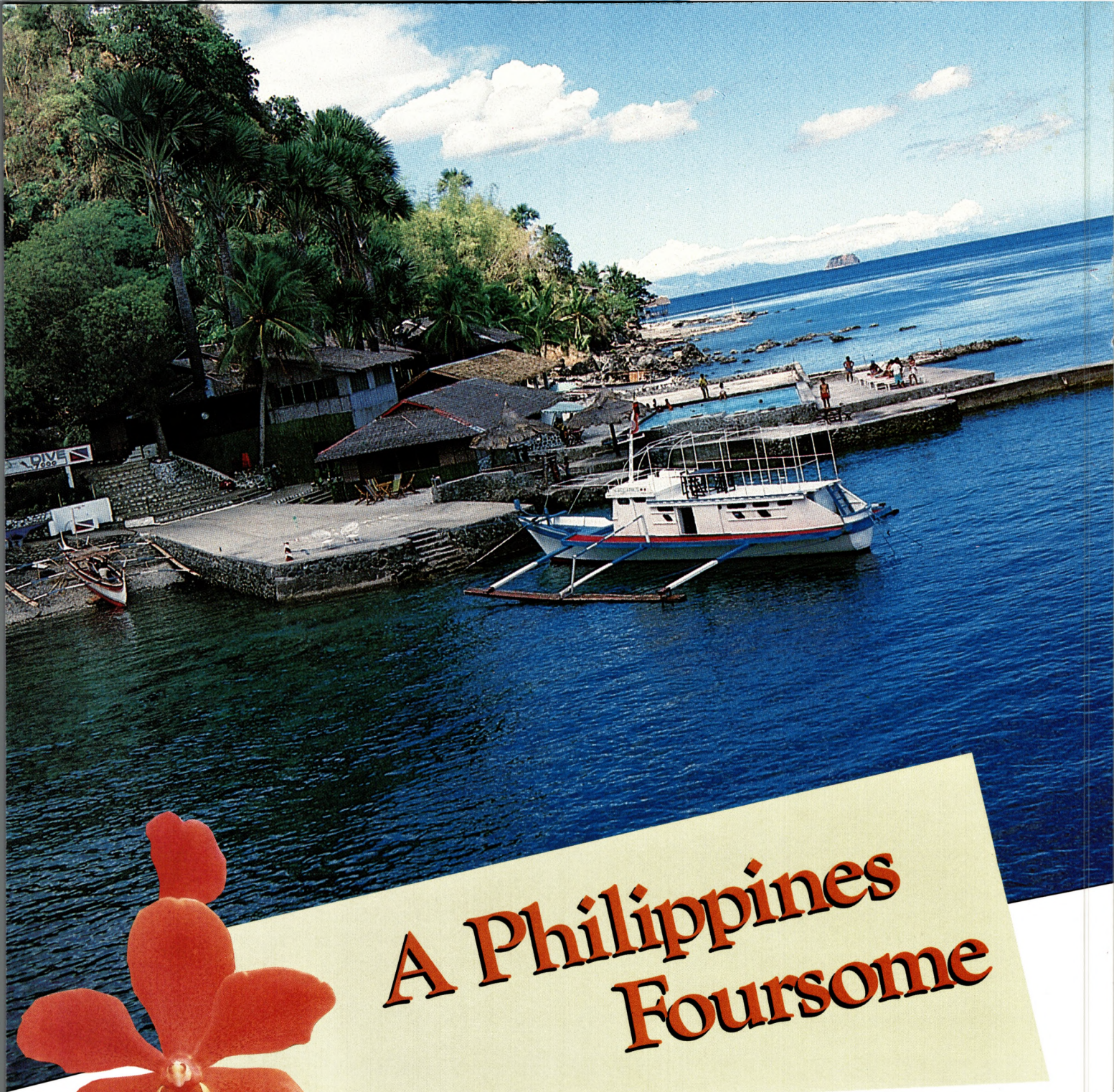


you get to experience Mexico and meet some of the most wonderful people in the world.

This is more than a dive trip. This is nothing short of a full-blown adventure. You create it, and you get to enjoy the act of improvising along the way, playing it off the cuff, often with some surprising, and unforgettable, results. So leave the schedules at home and hit the road running. And don't forget, take a little time out for just doing nothing. ■

Joni Dahlstrom is PACIFIC DIVER's editor-at-large.

The best part about a driving & diving Baja adventure is that you get to experience the real Mexico and meet some of the most wonderful people in the world.



A Philippines Foursome

The Four Hottest Dive Spots in a Sea of 7,000 Islands

The Philippine Islands stretch for over 1,000 miles along the western edge of the Pacific Ocean. The archipelago is made up of 7,107 islands, and the surrounding waters support what's said to be the largest variety of marine life in the world. To date, over 2,000 species of fish have been identified, and no doubt there are more yet to be discovered.

Of the more than 7,000 islands, less than 800 of them are inhabited, and these by a cultural mix as diverse as the islands themselves. Malayo-Polynesian, Chinese,



Article and photos by Lynn Funkhouser

Indian, Spanish and American influences can all be seen in varying degrees on the different islands. Seventy languages and dialects are spoken, although English is spoken almost everywhere.

Filipinos are among the warmest, most friendly people in the world, and this makes traveling in their country all the more delightful. Because I have traveled extensively throughout the Philippine Islands, I'm often asked about the country's political instability and if I ever fear for my safety. My answer to that is simple: for the past 15 years I've spent an average of two months each year in the islands, and I have yet to have any problems, whether out in the countryside or on the crowded streets of Manila.

Another misconception about the Philippines is that all of its reefs have been damaged or destroyed. According to some reports, 70 percent of the reefs are in poor to fair condition. While I think that this figure is grossly exaggerated, let's say for the sake of argument that it is accurate. That means, then, that the remaining 30 percent of the country, or 2,132 islands, are relatively unspoiled. (Compare that to the Caribbean which has a total of only 800 islands.) I can only say that the reefs and marine life you will experience in the Philippines are some of the finest in the world.

Since to cover the entire archipelago would require more pages than you'd find in a year's worth of *PACIFIC DIVERS*, let's take a look instead at four diving areas that I feel rank among the best in the Philippines.

WORLD FAMOUS TUBBATAHA REEF

When talking about diving in the Philippines the name that most frequently comes to people's minds is Tubbataha Reef in the Sulu Sea. This place has everything: awesome walls starting as shallow as 10 feet and plunging to depths unknown, mantas, large schools of fish, lots of white tip sharks and often 200-foot visibility.

After diving the sheer walls which seem to pulsate in shades of purple, pink, red and yellow, you ascend to the shallow areas where every patch of coral seems to have been perfectly placed, like in an underwater garden. It becomes a matter of "Which way do you look?" as you are torn between admiring all the nudibranchs, corals, sea fans, shells and clownfish and watching the blue water behind you for the pelagics. (Whale sharks are often seen here.)

Dusk is an especially exciting time at Tubbataha. Huge schools of fish — thousands of them — come sweeping into the reefs to find places to spend the night. And then the night critters come out, and the underwater night life begins, complete with predation maneuvers and mating rituals. Then at dawn, this underwater world transforms, and entirely new daytime vistas unfold before you.

Tubbataha is accessible only by live-aboards, and there are two good ones at your service: the *Lady of the Sea* and the *Tristar*. Both have wonderful crews and great food. They depart from Puerto Princesa, Palawan, which is about a 1½ hour flight from Manila on Philippine Airlines.

Continued

Dive 7000 Resort in the province of Batangas. In the 75-degree water you can find anemones the size of wagon wheels.

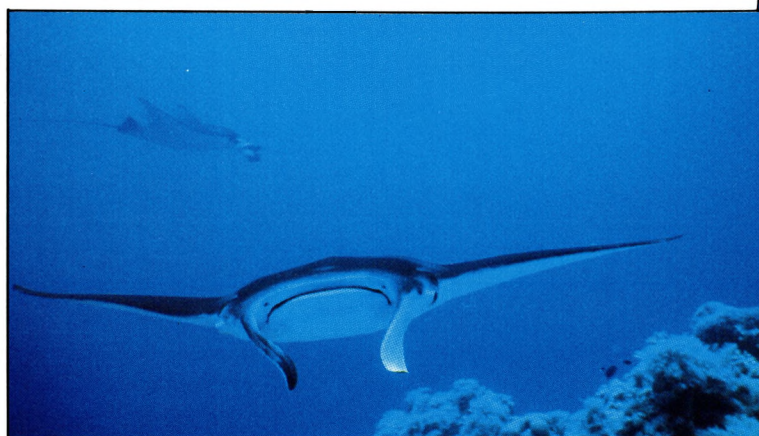


Just off the island of Bonito there is an underwater hot springs in about 30 feet of water that's like swimming in champagne.





Tubbataha Reef is accessible only by live-aboards which depart from Puerto Princesa.



The 85-degree water of Tubbataha Reef is home to a variety of pelagics like these manta rays.

Tubbataha Reef is divided up into North Islet and South Islet. The southern islet has a lighthouse. If you get a chance, make sure to go ashore to photograph the sea birds. Tubbataha is diveable March through June only. Water temperatures average around 85 degrees.

ESCAPE TO EL NIDO

Located on northern Palawan in a scenic section of the island, El Nido derives its name from the swallows' nests built high in the cliffs which are harvested for bird's nest soup.

Accessible via private aircraft from Manila, you know something special is about to happen when you fly over this beautiful area and touch down on a dirt

airstrip lined with bougainvillea. As the plane rolls to a stop you are met by a cart pulled by a caribao (water buffalo) which transfers your baggage to a large banca (outrigger-style boat) which will take you on a scenic half hour ride out to the El Nido Resort.

El Nido Resort is nestled between several black marble mountains and features a crescent-shaped white-sand beach. There are seven cottages built on stilts over the water and 14 garden cottages surrounded by beautiful tropical flower

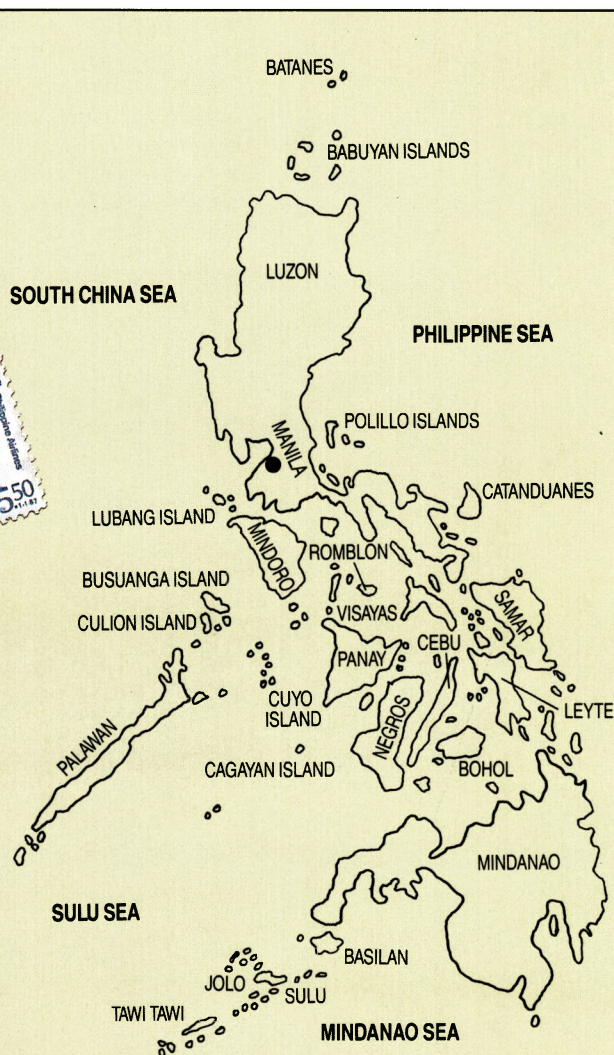
gardens. Three of the cottages are located up some very steep stairs which afford a spectacular view, but can be difficult to get to if you have lots of camera equipment.

Diving is excellent year-round, although the best times to go are from March to June. Right in front of the resort is a fish feeding station where you can find those fish that are so hard to photograph elsewhere as they pose for your camera while waiting for their daily handouts.

One dive to 100 feet has about 15 volitan lionfish hanging out over forests of



Gypsy caravans carrying rattan to market can be persuaded to pull over for a photo session.





Shallow coral plateaus at Tubbataha Reef tumble over awesome ledges that plunge to depths unknown.

black coral. Another dive offers lots of blue-spotted stingrays in about 50 feet of water. There is also a spot where you can find large crevices and caves in 10 to 20 feet of water swarming with silversides.

In between dives there are wonderful beach lunches or buffets back at the resort featuring fresh seafood, chicken, pork, fresh vegetables and fresh fruits. Or, you can opt to be put on a private beach of your choice with food, beverages, blankets, your favorite dive buddy and your fantasies, with instructions to be "rescued" only when you're ready.

El Nido Resort offers only two dives per day and *no night diving*, so it is not a place for "gorilla" divers. But if you want an incredibly beautiful place to relax, where you can enjoy spectacular daytime diving, explore secluded lagoons with caves and gorgeous beaches, and then return to the resort to be pampered with beach lunches and extravagant sunset dinners, then El Nido is the place for you.

The only drawback to El Nido may be the communal bathrooms, but they are immaculately maintained and so well



At the Bohol Beach Club two 65-foot bancas will take you to the best dive sites.

Pagsanjan Falls, about a two-hour side trip from Manila, was the location for the filming of the movie *Apocalypse Now*.



situated that you don't mind the inconvenience. "Trips" allow you to take a walk through gardens and enjoy the flowers and the wildlife — eagles, a monkey, guinea fowl, ducks, cranes, show pigeons and occasionally wild parrots fly in to take advantage of the feeding stations.

BOHOL FOR AVID DIVERS

A smaller island located between the eastern islands of Cebu and Leyte, Bohol Island and its surrounding waters have a lot to offer divers of all levels.

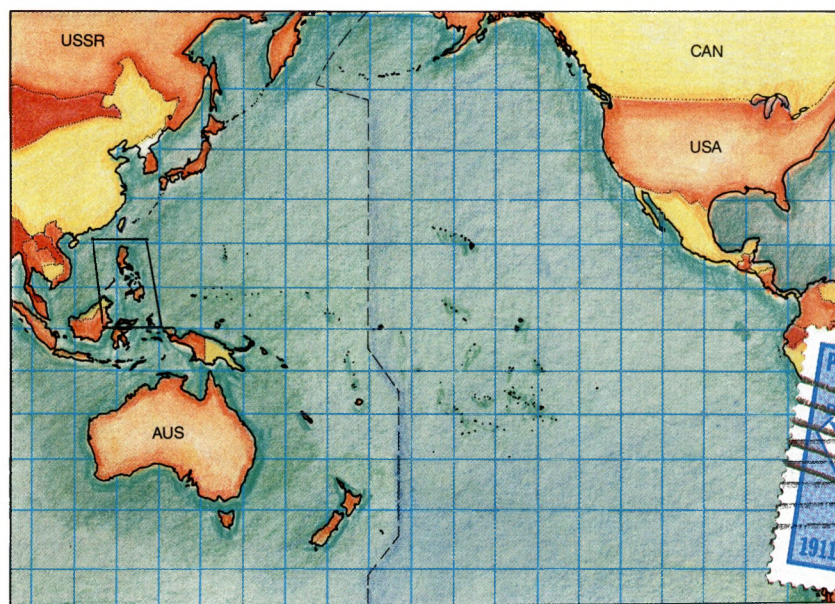
The Bohol Beach Club is a resort located along a beautiful white-sand beach rimmed with palm trees. There is an open air, thatched-roof dining room, lounging areas, a swimming pool, tennis courts, pool tables and a bar, as well as windsurfing and diving facilities.

Two 65-foot bancas transport divers to the various dive sites. In a country where dive masters are extremely helpful, Joey Vaenzuela and his staff still deserve a mention. Even though we experienced an unseasonal Force 11 typhoon, we only lost one day of diving and were able to make up those dives later. The most appreciated

service they provided was to rap on their tanks while I was shooting macro subjects to let me know that enormous schools of pelagics were passing behind me.

The dive sites of Bohol are many and varied. To the southwest Pamilacan Island is named for the manta rays which breed there between February and May. Balicasag Island brings to mind Tubbataha with its dense corals and vertical drop-offs. Here the clownfish are plentiful, and pelagics cruise by like they were on a timetable. Both species of flashlight fish can also be seen here on night dives as well as lots of shells, octopuses and Spanish dancers.

Balicasag is a wonderful place for beach lunches. Local children and friendly shell vendors provide lots of bargaining and photo opportunities. It was great to see so many live shells underwater even though locals harvest them on a regular basis,



The Philippine jeepney is a popular form of transportation among the locals.



proving that if harvested properly locals can make a living and tourists can bring home a few souvenirs.

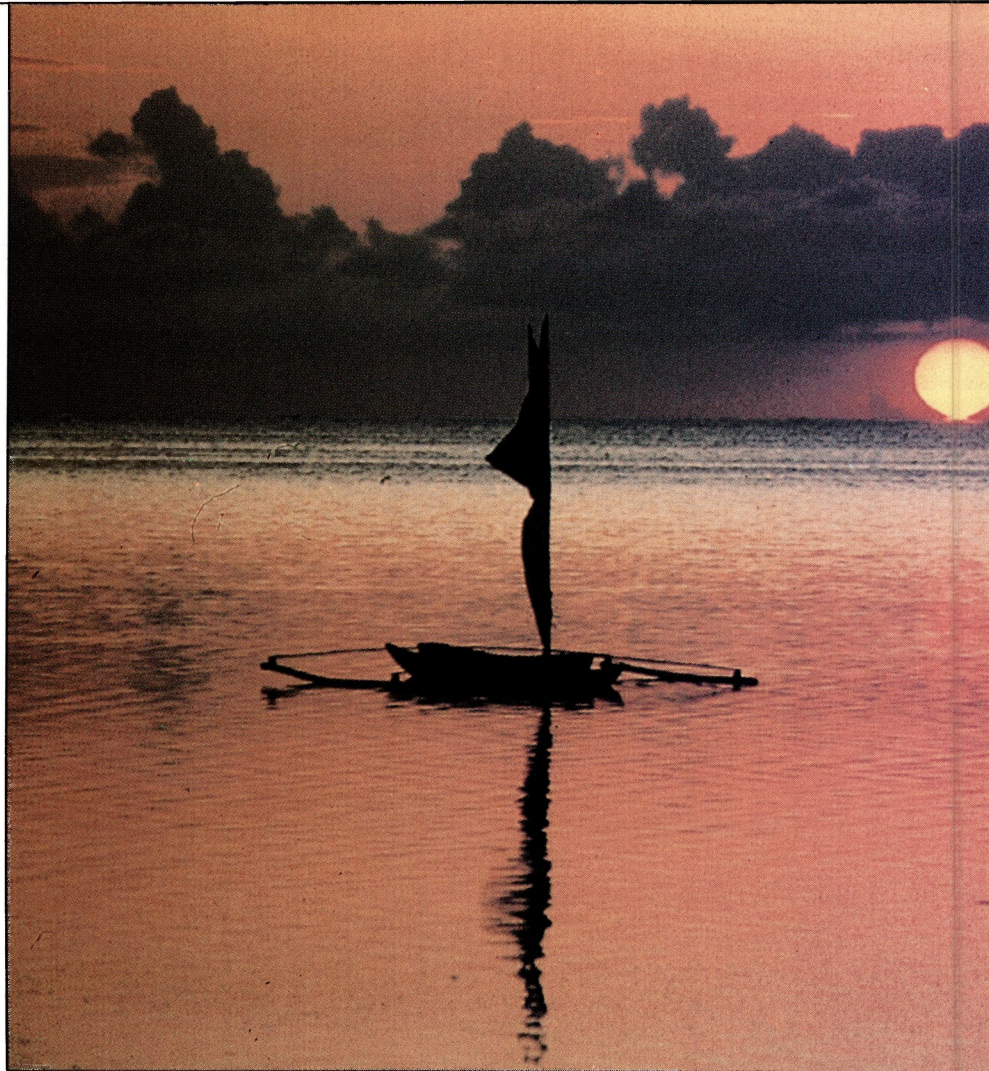
One of the few places where you can see lots of black and white banded sea snakes is Cervera Shoal, just west of Pamilacan Island. When the currents cooperate, dive masters organize expeditions to the shoal, where you'll also find huge expanses of coral, volitan lionfish and maroon clownfish.

But you don't have to wander far from the Bohol Beach Resort to find some excellent diving. A whale shark passes right in front of the resort daily and a wall teeming with sea life is just a short distance away.

In addition to the wonderful sights underwater, there is so much to do topside that you may want to take a day or two off from diving to take a river safari, explore some of the local caves or hike through the mahogany forests. This is an excellent destination to take along a nondiving spouse or the whole family.

To reach Bohol, you have to take Philippine Airlines to Cebu City on the island of Cebu, the second largest city in the Philippines, and transfer to a small plane to Tagbilaran City on Bohol. If you happen to find yourself with several hours on your hands in Cebu City, hire a jeepney (agree to the price *beforehand*) and take a tour of Mactan Island (connected to Cebu by road) to see the Lapu Lapu Monument, where the Filipino Lapu Lapu killed the explorer Ferdinand Magellan and many of his troupes.

The best time to visit Bohol is



November through May, but diving is possible all year.

UNDERWATER BEAUTY OF BATANGAS

Batangas is a province on the southern end of the island of Luzon located approx-

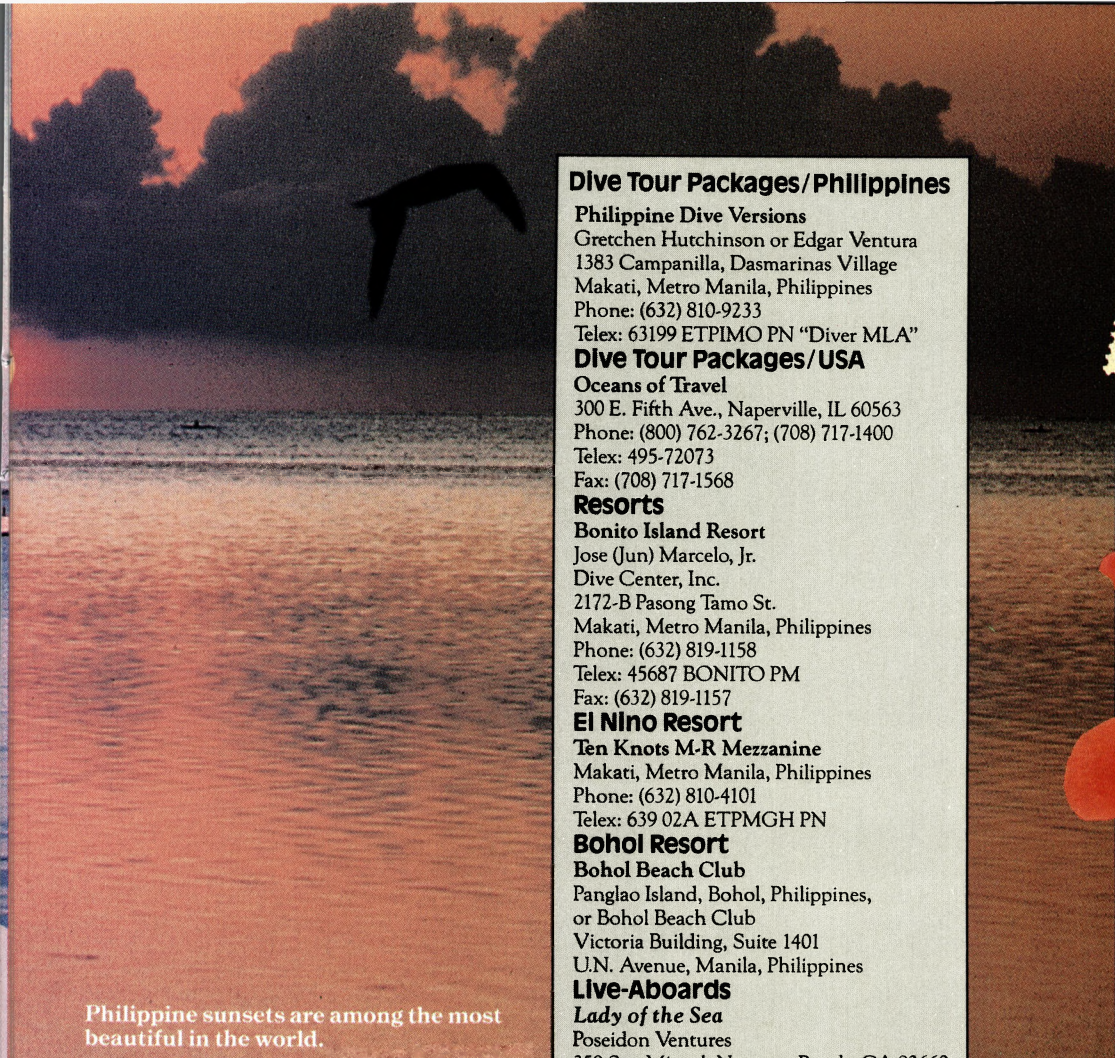
imately 50 miles south of Manila. If you travel from Manila by car and you are an avid photographer, allow plenty of time to get to Batangas. Early morning or late afternoon you might find the wonderful rattan-laden gypsy carts drawn by beautiful white or brown caribao traveling in caravan. For a few pesos (20 pesos = \$1) you can have the whole caravan pull off the highway for a photo session. Traveling along the road you may also see farmers and their caribao plowing rice fields, families planting or harvesting crops, women washing clothes in the streams, and beautiful fruit and produce stands along a road lined with exotic flowers and tropical plants.

If you go through Tagaytay, there are spectacular views of Lake Taal and the volcano. Batangas City is worth stopping in if you want to see a thriving provincial market.

During the best diving season between October and June, Batangas water temperatures average 75 degrees and a rich plankton environment supports an incredible number of fish and invertebrates. Crinoids in all colors are everywhere, as are many species of nudibranchs. Sea cucumbers range in size from the beautiful yellow inch-long variety to the four-foot-



Tomato clownfish cluster around the fish feeding station off the beach from the El Nido Resort.



Philippine sunsets are among the most beautiful in the world.

long species. There are at least a dozen species of clownfish, and some of them live in anemones the size of wagon wheels. And all of this can be found in 10 to 20 feet of water.

Bonito Island Resort is on its own island, located just off the east end of Maricaban Island at the mouth of Batangas Bay. Bonito Island is accessible by boat from the Batangas City dock (either one dollar per person on the ferry or hire your own banca for \$15 to \$25, but it is probably best to make arrangements through Bonito Island Resort owner Jun Marcelo or a tour operator).

There is a fish feeding station near the resort that attracts swarms of butterflyfish. One unique dive in shallow water has actual sea goblins — strange looking fish that look like a cross between scorpionfish and sea robins. At that same spot you'll find beautiful white nudibranchs with large orange spots, a species that I haven't seen anywhere else.

Just off Bonito is Malajibomanoc (or chicken feather) Island which has an underwater hot springs about 30 feet deep. It's fun to swim through the champagne-like bubbles, and it is said that you can cook an egg if you bury it in the sand there. There are lots of large sea fans, huge

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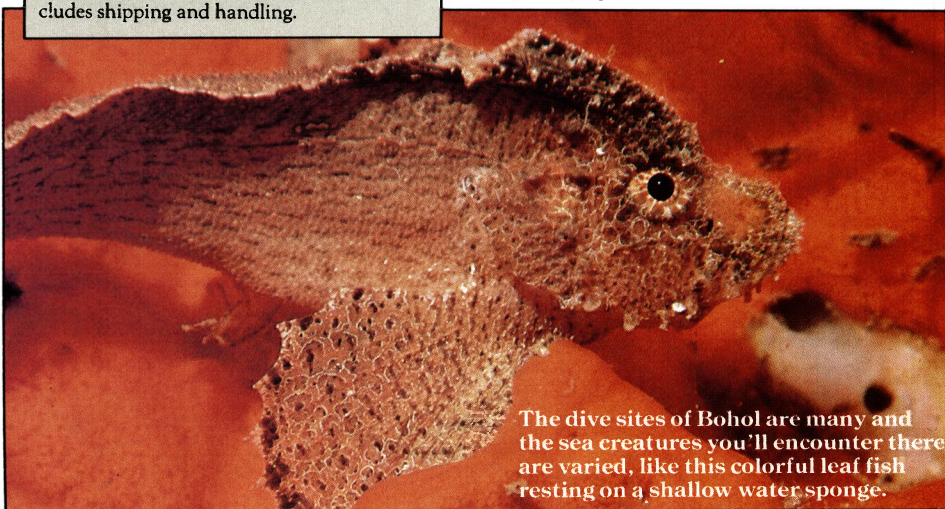
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sponges and many macro critters along its perimeter.

Each one of these Philippine dive locales could keep you busy for weeks, and they are just four spots in an island chain with countless similar diving opportunities. You could vacation in the Philippines every year for the rest of your life and never even begin to cover the exceptional dive locales the islands offer, but these are good places to start.

Lynn Funkhouser is a professional writer and photographer based in Chicago, Illinois.



The dive sites of Bohol are many and the sea creatures you'll encounter there are varied, like this colorful leaf fish resting on a shallow water sponge.

Deep and Steep

Eight Great Southern California Pinnacle Dives

Article and photos by Darren & Stacey Douglass

The dive boat rocks restlessly at anchor in the morning swell while a squadron of California brown pelicans skirts the water's surface in perfect formation. Eastward, the mainland is barely visible in the haze.

One after another, divers giant stride over the side and snorkel against a mild current toward the anchor line. Following the thick braided rope downward, they drop into the depths. The visibility is so good the hull of the boat can still be clearly seen from 50 feet below. But the bottom has yet to materialize. Depth gauges read 70, 80 and then 90 feet, but nothing interrupts the backdrop of blue barrenness except for the occasional passing of schools of baitfish.

As the anchor line begins to slacken, giving way to heavy chain, a dark form rises up from the depths. The anchor chain lies wrapped precariously atop a small rocky summit adorned with anemones and branching gorgonian fans. In the clear but dimly lit water, divers switch on their lights and the surrounding marine life explodes in color. Brilliant rockfish line the rocky crevices while magnificent plate-sized scallops adorn substrate, their orange and green mantles seemingly smiling in welcome.

It's the alluring underwater world of the offshore pinnacle. Reef dives may come and reef dives may go, to be remembered only remotely in a jumble of logbook entries. But no reef dive compares to diving a deep water pinnacle.

Offshore pinnacles provide Pacific divers with a unique ecosystem, combining the

best of a reef environment with the bluewater world of pelagics. On these underwater sea mounts, you'll commonly encounter varieties of wrasse, sheephead, calico bass, lobster, scallops, abalone, rockfish and other reef residents, while at the same time enjoying drifting pelagic jellyfish, squid, barracuda, jack mackerel, skipjack, bonito, yellowtail, varieties of tuna and the occasional shark.

Offshore pinnacles are underwater boom towns to filter feeding organisms as they receive a constant supply of fresh-flowing, nutrient-rich water. Scallop hunters can bag a respectable limit in a short period of time, while underwater macro photographers will go wild with the endless profusion of tube worms, anemones, starfish and other colorful critters that they can fit into their viewfinders.

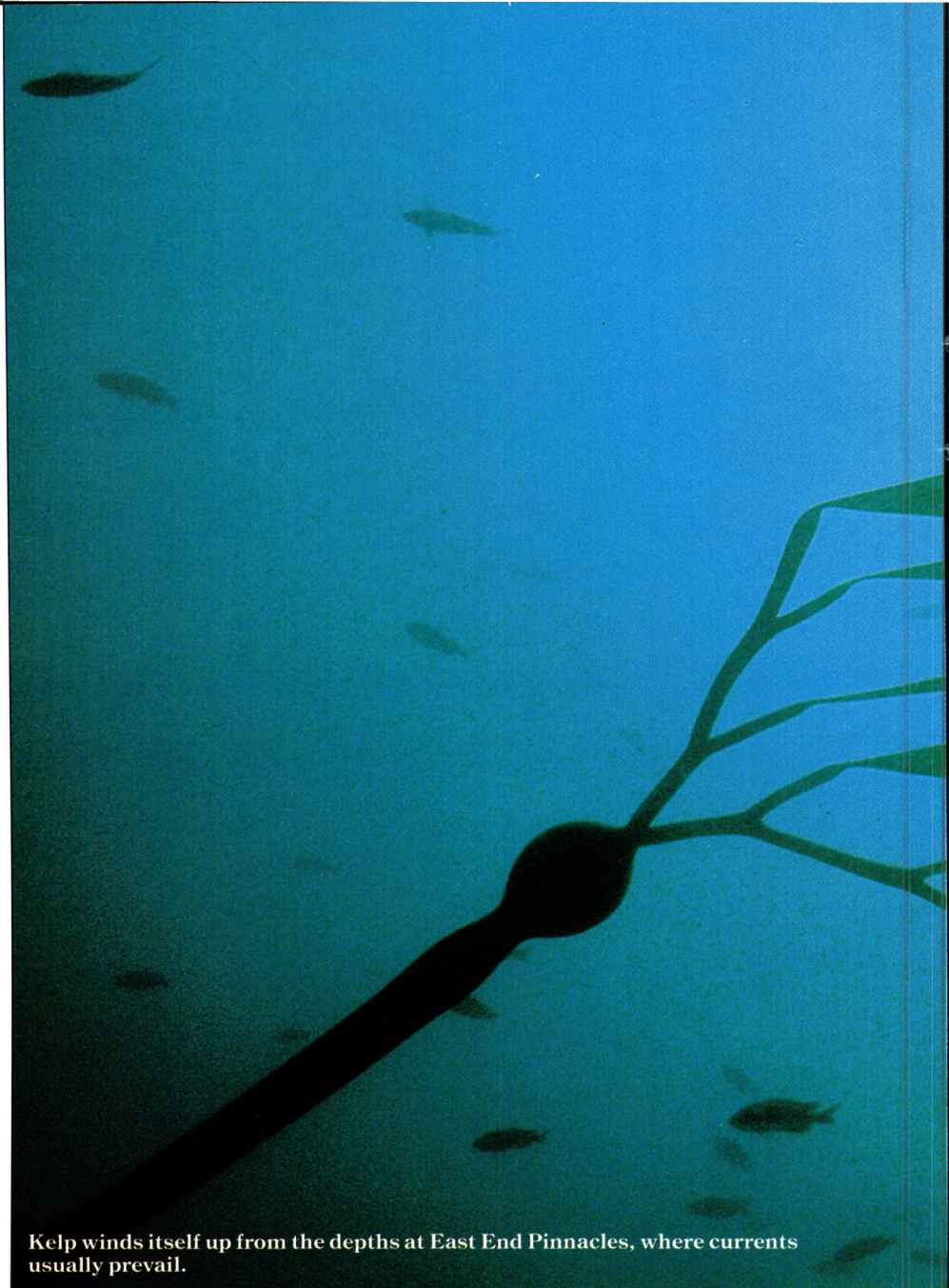
There are many pinnacles located off the

Southern California coast, all varying in terrain and marine life, all maintaining their own individuality. Some are remnants of heavily eroded mountains that were formerly part of much larger channel islands. As Ice Age glaciers melted, the sea level rose, and these small peaks were buried under fathoms of ocean.

Following are what experienced divers consider to be the "Big Eight" of Southern California's offshore pinnacles.

WILSON'S ROCK

Of all the members of the Channel Islands chain, perhaps no singular island is as well endowed with offshore pinnacles as San Miguel. Located two miles off the northwest side of San Miguel Island, Wilson's Rock breaks the surface in a foaming swath of surge and brine. A small, isolated, low lying rock system, it is best characterized by the steep walls that plum-



Kelp winds itself up from the depths at East End Pinnacles, where currents usually prevail.



An unusually calm day at Richardson's Rock, San Miguel Island.

met hundreds of feet beneath the surface. On calm days, Wilson's Rock plays host to a thriving underwater community. The drop-offs are covered with iridescent hydrocorals. Rainbow, purple and green-spined starfish adorn the cracks and crevices while large scallops are found in the deeper reaches. Large red and white rose anemones, tube worms and sweeping barnacles add diversity and vividness to this incredible display of marine life.

Since Wilson's Rock has been heavily dived over the years, at shallow depths the ledges are scarred. Barren clumps of reef identify where large scallops once thrived



A Spanish shawl snoops along the edge of a pink gorgonian at Skyscraper. Like its name, the terrain surrounding this pinnacle is extremely steep.

and broken chunks of coral reveal the legacy of careless divers. To see Wilson's Rock at its best, you have to dive deep. Down along the more pristine 90- to 100-foot depths, you'll notice a significant difference.

RICHARDSON'S ROCK

Located eight miles seaward of San Miguel Island's northern corner, lonely Richardson's Rock is only rarely dived. If weather conditions are unfavorable, which is often the case in this area, dive boats can't get out to the pinnacle. Consequently, Richardson's Rock offers a glance into the environmental past, providing insight as to how today's more commonly dived areas looked years ago.

More a small islet than a rock, this steep-sided, wave-swept land mass is a haul out point for sea lions, and offers some of Southern California's most intense diving. When conditions allow dive boats to venture out to Richardson's Rock, visibility is usually stupendous. Fed by clean, clear oceanic currents, the excellent water clarity provides a sharp contrast to the bright red, purple and vermilion anemones that inundate the rocks.

The ledges at Richardson's Rock drop off sharply, rolling from a shallow shelf to sheer walls that plummet into the gloom. Constant surge from rambling oceanic swells generally preclude shallow diving even on calm days; consequently, divers usually have to begin their exploration in waters 60 feet and deeper. But at these depths, you can work your way along dramatic walls covered with scallops and striking photographic material.



Brilliant corals are common on the rocks of Nine Fathoms, which maintains a well-earned reputation for clear water, towering kelp beds and an abundance of hydrocorals.



Diver explores a deepwater wall covered with bright yellow anemones.

SKYSCRAPER

A third and equally dramatic pinnacle also lies off San Miguel, not far from Wilson's Rock. Called Skyscraper, it is a favorite destination of Santa Barbara and

Ventura-based dive boats. Skyscraper represents an unspoiled ecosystem that has yet to see much negative impact from man. In fact, several charter boat operators have tacit agreements with their passengers that no game will be taken from the area, making it a sort of private, yet very public preserve.

Like its name, the surrounding geological terrain is extremely steep, rising up from great depths to within 60 feet of the surface and plummeting downward to 130 feet and beyond. The base of Skyscraper features a series of ledges and caves carved deep into the rock escarpment. Here, divers can swim beneath impressive overhangs, peer out into the crisp clear water and enjoy the continuing slope of the reef.

Large scallops grow in abundance here, as do extensive aggregations of red, white and lavender club-tipped corynactis and yellow anemones. Larger varieties of spotted rose, white and purple anemones grace crevices and ledges, adding their own colorful contributions to the invertebrate tapestry growing along the walls. Vermilion rockfish dart along the bottom, and occasionally you'll stumble across a brown mottled lingcod of monstrous proportions. In all, the variety of marine creatures encountered at Skyscraper make it truly a standout site among California's offshore pinnacles.

EAST END PINNACLES

A considerable distance off the eastern tip of Santa Rosa Island lies an extensive patch of kelp that winds its way from deeper water up to the surface. Here, several pinnacles rise off the bottom, revealing a system of cracks and fissures, ledges and small vertical walls. The summits begin in the 40- to 50-foot range and dramatically drop to the sand floor at 90 feet and beyond. Diving the East End Pinnacles you'll encounter thick, luxuriant kelp, a variety of fish species and scores of invertebrates. Current usually prevails in the area, which can at times hide the kelp from surface view. Photographers utilizing large extension tube framers with a housed 50mm macro system will find the area particularly rewarding.

Oversized white rose, spotted rose, giant green and tube anemones are abundant. At deeper depths a few china white and almond metridiums can be observed growing along the rocks. Large scallops attach themselves to crevices and are fed by the rich, prevailing current. Visibility can be very good in this offshore garden; ranging from 40 to 70 feet when plankton is not present. In season, lobster can occasionally be found, provided you know where to look.

MATTERHORN

This is the stuff legends are made of. Only a handful of veteran pioneering divers from as recently as the '60s and '70s can tell the tale of this elusive, yet awe-inspiring dive spot.

Located off the Ventura Coast en route to Santa Barbara Island, one of the first to place a privileged group of divers on Matterhorn was Roy Hauser in his dive boat *Truth*. Matterhorn looms up out of the depths with its summit barely scraping the 100-foot mark. The peak itself is described as being "no bigger than a coffee table." Finding this proverbial needle in a haystack is difficult, and securing an anchor to it often requires something short of a miracle.

Since it's out in the middle of nowhere, there's never a guarantee that conditions will allow diving, or even that the pinnacle will be located. But when conditions permit, diving Matterhorn is like diving an underwater space needle. You can swim circles around the top and then gradually spiral deeper. The structure is swarming with rockfish, anemones and a dense concentration of corals. One of the best pinnacle dives around, to this day it is still rarely visited.

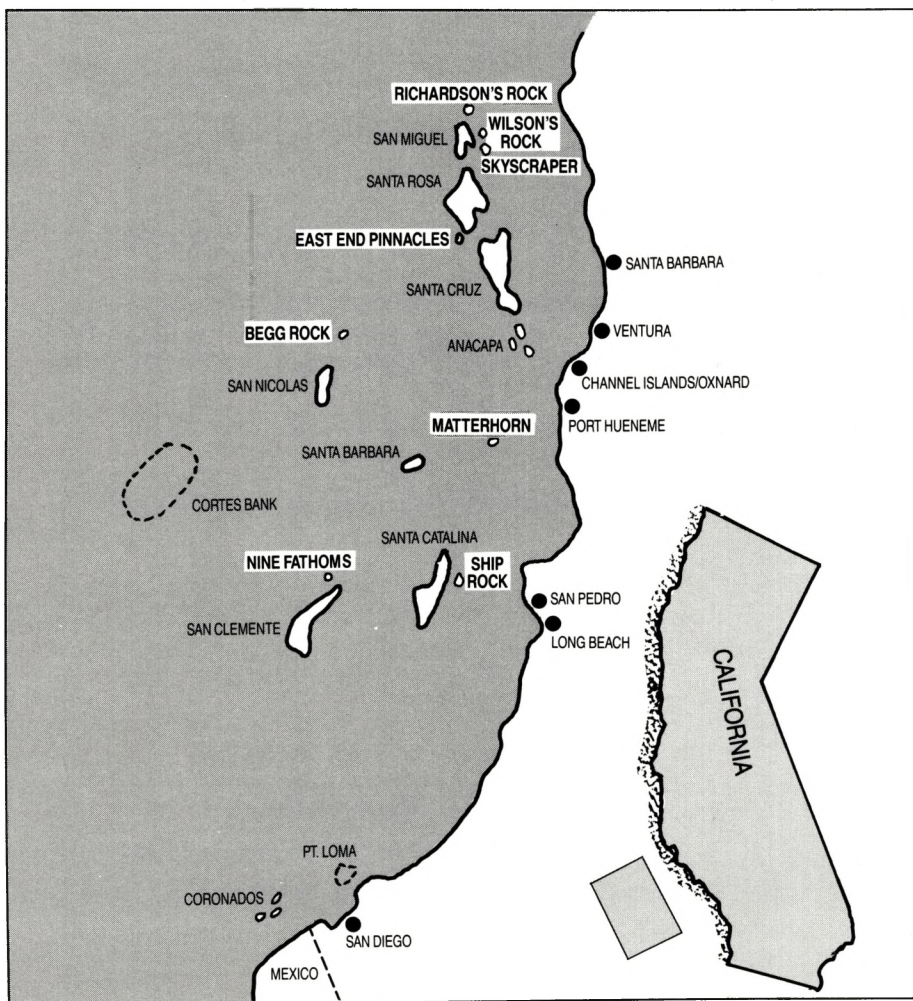
SHIP ROCK

Known as one of the best dive sites on Catalina Island, Ship Rock has yet to become a heavily-dived spot, compared to other sites on the front side of the island, primarily because of the depths that can be encountered there.

This distinctively shaped, guano-covered pinnacle marks the entrance to the Isthmus, so is passed regularly by local dive boats. Consequently, it is the privateer diver with his own boat who usually ends up visiting this outstanding dive spot.

Ship Rock features a shallow shelf close to the surface, ringed with sparse fields of kelp that add ambience to the rapidly sloping terrain. In the late summer and early fall months when favorable conditions prevail, visibility can exceed 100 feet. Depending on the angle of a boater's approach (determinant upon wind and current conditions), Ship Rock's drop-off either resembles a sheer ledge (facing the Blue Cavern Point area) or a meandering razorback that ambles toward deeper water before making its dramatic plunge at the 60-foot level.

At its base in over 130 feet of water, rocks and boulders give way to quickly



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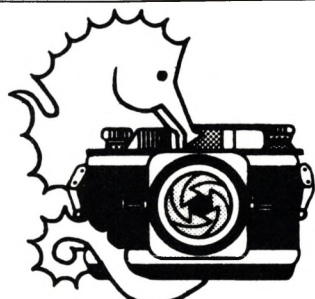
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sloping sand that continues into ever deeper depths.

At certain times of the year, this deep-water sand plain is home to halibut and flounder as well as sedentary congregations of four- to five-foot Pacific angel sharks. When these angel sharks make the base of Ship Rock their temporary home, they literally blanket the sand flats. It is difficult for a visiting diver to find a spare patch of sand on which to alight to take pictures.

NINE FATHOMS

Moving farther south, a long-time favorite among both dive boat captains and their passengers is the high spot rising out of deep water near the northwest end of San Clemente Island. This area near Castle (or "Target") Rock maintains a well-earned reputation for clear water, towering kelp beds and an abundance of shockingly bright purple and red hydrocorals.

Nine Fathoms can be comfortably dived only on calm days since its position is exposed to swells from the north, west and south. While the diving is almost always first-rate, such surface conditions tend to create a boat full of seasick passengers.

Currents are generally a factor here as well, but that also helps to maintain the excellent visibility that Nine Fathoms is well known for. Water clarity averages 60 feet, but it is not unusual to find days of 80-, 100- and, occasionally, 120-foot visibility, especially during the summer months.

Topographically, Nine Fathoms resembles more of a submerged rolling sea mount than a sharp-sided precipice, but the diving is no less spectacular. Starting in 40 to 60 feet of water you begin to encounter iridescent hydrocorals. Resembling miniature versions of the stag and elkhorn coral found in more tropical climates, these cold water coral formations are stunning. As you drop deeper, these formations increase in density. It's a good idea to bring along a small light which will transform the muted hues of purple and pink into a vibrant display of color.

In addition to the hydrocorals, large concentrations of purple, orange and red gorgonian fans blanket the rocks. And while the presence of kelp is often dependent upon recent storm activity, when kelp has been given an opportunity to grow, you'll find eight to 10-pound calico bass cruising through the lush forests. Occasionally, schools of Spanish mackerel sweep through the area like a silver express train. And where the site drops off into deep water, it's not uncommon to encounter varieties of jack, tuna and mola mola.

When weather and water conditions cooperate, the diving at Nine Fathoms is

probably the best San Clemente Island has to offer.

BEGG ROCK

A lonely and isolated oceanic outpost located eight miles from San Nicolas Island, Begg Rock is considered by many divers to be Southern California's favorite offshore pinnacle.

This stoic outcropping earned its name in 1824 by punching a hole into the passing schooner *John Begg*. Today a whistle buoy and navigational light mark the site as a warning to other mariners.

Strong currents and open ocean swells often sweep through the area, making diving difficult if not impossible. But the persistent diver (it often takes three or four attempts to catch it on a day with good conditions) will be justly rewarded.

Unless plankton blooms are present, visibility at Begg Rock (like Richardson's Rock at San Miguel) is usually no less than spectacular. The reef system consists of three main pinnacles with a shallow razor-back ridge connecting two of them. Between these mountainous spires the depths plummet hundreds of feet, but the excellent visibility permits you to swim from peak to peak.

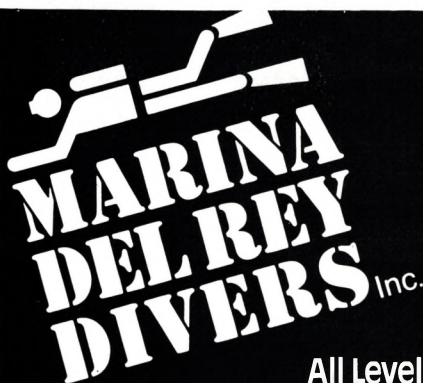
Diving at Begg Rock varies, from the surge 20- to 30-foot shallows to extreme depths surpassing 120 feet. Pancake-sized scallops grow along the vertical ledges as do myriad checkerboard anemone fields, resembling patches of cultivated farm land.

Begg Rock is also well-known for its vast starfish aggregations. The steep volcanic walls are often completely covered with bat stars, giant green stars, fragile rainbow stars and others, quilting colorful patterns of green, yellow, lavender, orange, cobalt and vermilion.

Due to the potential for dropping to great depths, care must be taken when planning dives at Begg Rock. Consequently, experienced divers (and those with a hardy stomach who can feel comfortable anchored in a lurching groundswell) will fare best at this distant pinnacle. However, during periods of calm, a dive boat can find itself in the enviable position of being able to offer divers several dives at Begg Rock, or rarer still, able to spend the entire day out there.

California divers don't have to fly half way across the world to dive the walls and ledges of open ocean pinnacles. With a warm wetsuit and California's fleet of charter boats at your disposal, pinnacle diving is within easy reach. Ask any experienced diver who has been out there; pinnacle diving is the stuff that diving dreams are made of. ■

Darren and Stacey Douglass are PACIFIC DIVER's feature editors.



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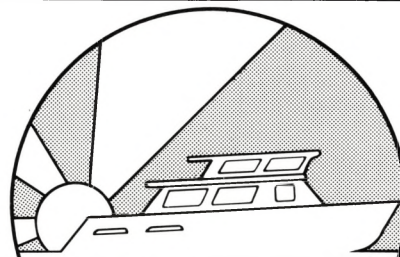
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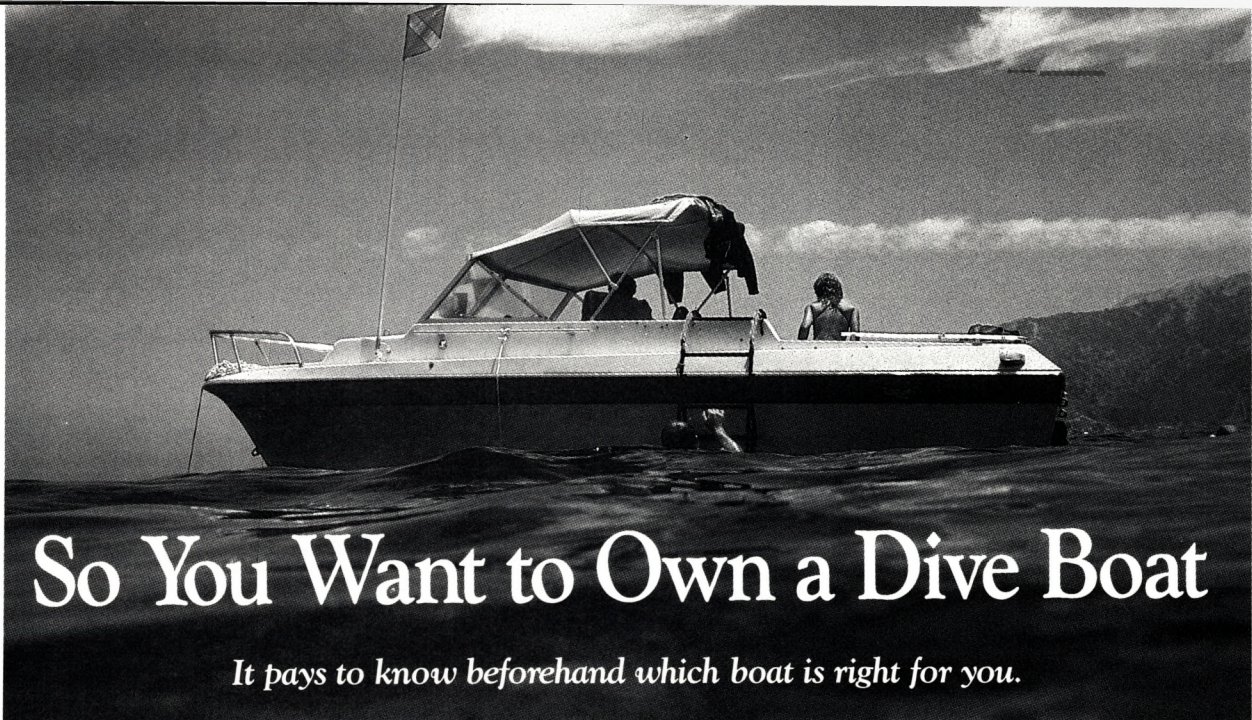


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So You Want to Own a Dive Boat

It pays to know beforehand which boat is right for you.

By Scott Sansenbach

Every diver at one time or another has considered buying a dive boat for his or her personal use. However, it's not uncommon for prospective boat owners to be dissuaded by former boat owners who subscribe to the theory that the two happiest days in a boat owner's life are the day he buys a boat and the day he sells the damn thing.

Such a gloomy attitude toward boat ownership can often be attributed to buyers finding themselves the disappointed owners of the wrong boat bought at the wrong price for the wrong reasons. But take heart; unhappy outcomes like these can be avoided simply by entering the boat buying market prepared.

DO YOU REALLY WANT A DIVE BOAT?

The first question you have to ask yourself is, what do you want a dive boat for, anyway? What type of boat diving do you plan to be doing? Exploring those coastal reefs too far offshore to swim to? Or do you plan to make day trips to the nearby islands, or multi-day diving/camping excursions, or maybe month-long trailerboating adventures to Baja California?

Will you be doing all of your diving off your own boat from now on, or do you plan on continuing to use the charter dive boats for multi-day and long-range trips? On average, how many people do you see yourself diving with on a typical boat diving trip? Is it usually just you and a buddy, or are you an instructor who needs to take small groups of students out for lessons?

Also, it's important to consider what uses, other than diving, you may have in mind for your boat. Do you want to also be able to water ski behind it? To sleep on it? Is comfort necessary for evening harbor cruises, or is bare-bones utility all you're going to need?

By having the answers to as many questions as possible you can form a mental picture of the type of boat that will fit all of your boating needs. Such a mental picture is crucial before you start pounding the pavement searching for that perfect boat.

NEW OR USED? IT'S HARD TO CHOOSE

Should you buy a new boat or used boat? There are advantages and disadvantages to each. New boats have a larger price tag and tend to depreciate rapidly, although this varies depending upon makes and models. Depreciation is not an important point if you are going to keep

the boat for a long time. However, anyone planning to finance a new boat with the intention of upgrading in a few years might find themselves owing more on the loan than the boat is worth when it comes time to trade it in on a new model.

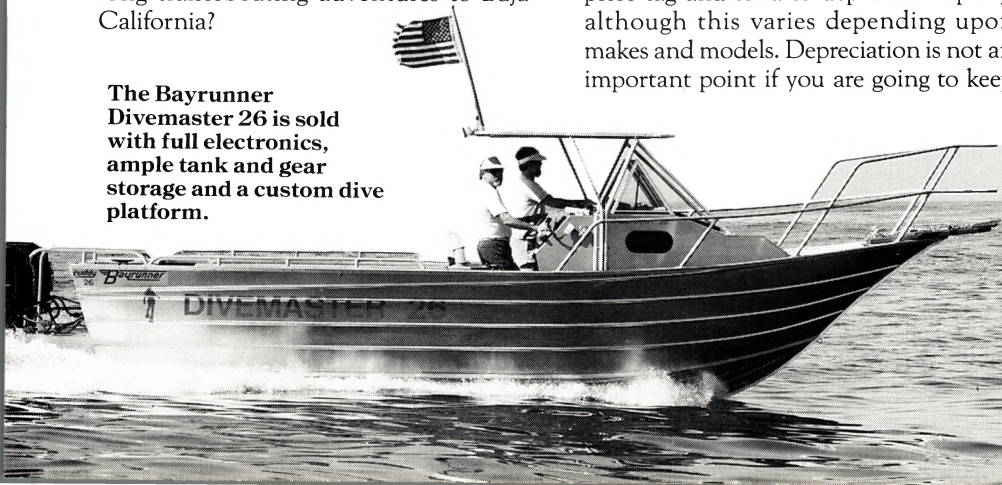
Buying a new boat provides you with the opportunity to outfit the vessel exactly the way you want it, while enabling you to cover all of your add-ons under warranty and on a single monthly payment.

Also, when you buy new you can oversee the quality of the maintenance the boat receives from the start. On the other hand, you'll also get to be the one to discover any bugs, and new boats invariably come with a glitch or two.

Many new boat dealers offer "package" boats that can be exceptional values. Package boats are a combination of boat, motor, trailer and accessories put together at the factory. You can almost always benefit from a considerable cost savings on these package deals, but you do lose the opportunity to custom outfit the boat yourself.

Buying a boat used can be a good idea too. Someone else has already dealt with all those nagging little problems and has probably added a few little touches to the rig to make it complete. Used boats usually are sold with a lot of extra equipment that has been added over time, and this is a major consideration. It takes a lot of thought and dollars to go from a bare boat, motor and trailer package to a fully equipped dive boat. Outfitting a boat with even the most basic necessities like anchors and anchor line and boarding ladders and fenders and dock lines can add up to a substantial expense on a new boat. A used boat, in contrast, usually

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already has all this equipment on board, included in the selling price.

If the previous owner was conscientious about upkeep and maintenance, a used boat can be as mechanically sound as any new boat, and sometimes even more so. But that's a big "IF," so if you are serious about a used boat make sure you go through the boat thoroughly. Ask for a trial run and check out all the equipment to make sure it works. If you are not familiar with boats bring along someone who is. Then, after your examination, if you're still serious about the boat, arrange to have it inspected by a qualified mechanic.

Winter is a good time to go shopping for used boats because they're used less, owners tend to lose interest in them, and therefore are more motivated sellers.

PRACTICAL CONSIDERATIONS

In addition to the on-the-water aspects of boating there are a number of other considerations that could affect the type of boat you choose and how much it will ultimately cost you.

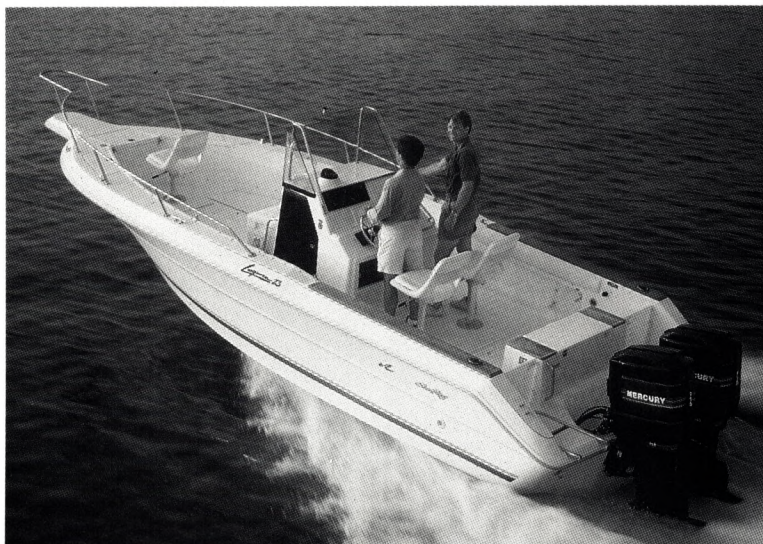
For example, if you plan to tow your boat you must remember to take into consideration the type of tow vehicle you have at your disposal. If the type of diving you plan to do requires a large boat, and your car is small, then you may have to be prepared to buy a new tow vehicle.

Insurance is another consideration, especially when you are financing a new boat. Boat insurance rates fluctuate widely. While they will usually be quite reasonable (as least when compared to car insurance), a poor driving record or a boat classified as a "high performance" model can radically boost rates. Many companies offer significant discounts if you complete an approved boating safety course. With boat insurance it can really pay to shop around.

If you can do your own maintenance you can save yourself a lot of money. If you are planning on paying someone to do maintenance and repairs on your boat then you should do a little research and find out just how much these costs will be. Remember also, if you are considering a twin engine boat, maintenance and operating costs will be effectively doubled.

The type of fuel your boat uses and its rate of consumption are also important considerations. Fuel costs can be significant, especially if yours is the only pocket the money is coming from. Make sure to find out what the estimated hourly consumption rate at cruising speed is for the boats you are considering, then estimate the running time for a typical dive trip. Compare the fuel consumption rate to the fuel capacity of the boat. This will give you an idea of your range. Will this range be

Center console boats are economical, designed to handle rough water and easily adaptable to diving.

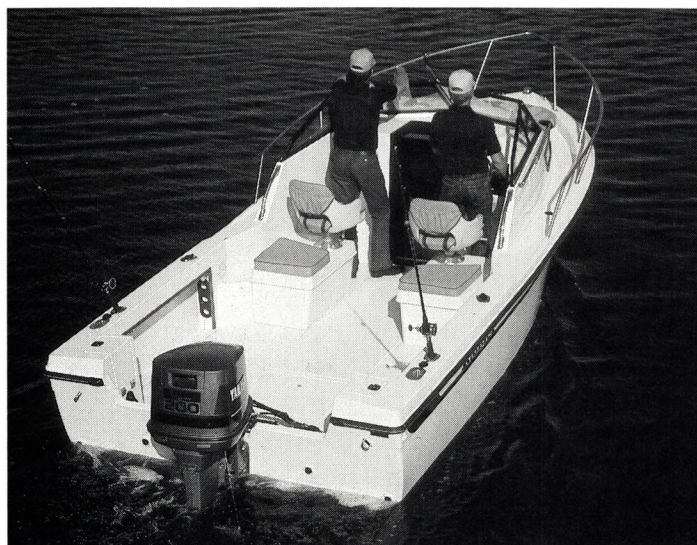


adequate for the destinations you had in mind? If not, is there room in the boat for auxiliary fuel tanks?

Finally, consider where you will be storing your boat. Will you be able to keep it at your home (a great idea, if possible), or do you plan to rent a slip (usually hard to find and very expensive) or rent space in a boat yard (just as hard to find, but not quite as expensive)?

Partnerships are a popular way of defraying all the costs of boat ownership, but they are not without their own problems.

The key to success is selecting a responsible partner you can get along with, preferably one who has compatible needs in the boat. A partnership, even an informal one, is like a business, the implication being that you need to conduct the partnership in a business-like manner. Work out ahead of time all the details you can think of that could result in a conflict at a later time. Make up a use schedule and determine how time and use conflicts will be resolved. Decide ahead of time who will pay for repairs due to accidental mishaps. If



Cuddy cabin boats are the top of the line for long-range diving, but they tend to be substantially higher in price.

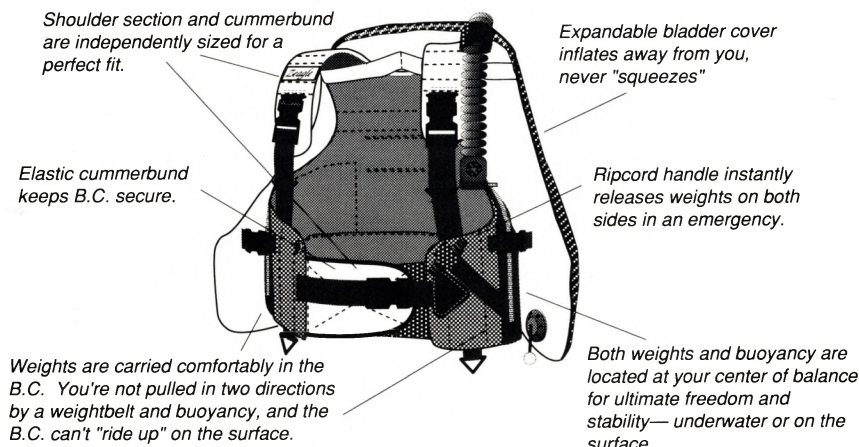
An inflatable can usually carry more people and gear than much larger conventional boats.



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you can work out the details a partnership may make boat ownership easier. But a mismatch could just as easily turn into a nightmare.

BOATS FOR ALL REASONS

While nearly any boat can serve as a dive platform, some are more suited to this purpose than others. Inflatables, for example, have some unique features that make them especially well-suited for diving. They are inexpensive, lightweight and compact. They are nearly impossible to capsize and carry a tremendous payload for their size. (A 16-foot inflatable can safely carry more people and gear than conventional boats eight feet longer.) They are also maneuverable, easy handling and sit very low in the water which makes them easy to get in and out of. Their light

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weight means that they can be powered by smaller, less expensive motors which use less fuel. Because they can be deflated and folded into compact packages, inflatables can be stored, transported and launched quite easily. Many inflatables can also be beach-launched at remote locations where there are no conventional launching facilities.

On the down side, inflatables are not very comfortable boats to travel in, or to dive out of. They are open, wet, and the ride tends to be bumpy. They also depreciate rather quickly (which can be a plus if you are looking to buy one used).

Another popular style of dive boat is the center console boat. These boats are economical, have ample deck space and storage, and are designed to handle rough water. They are easily adaptable to diving with the addition of tank racks and a swimstep. Because the center console boat is such a popular design, these types of boats tend to have high resale values.

However, center console boats are often rather spartan. They are open to the elements and generally lack toilet facilities and bunks. Of course, some larger center console models can be equipped with cushions and a canvas cover which converts the bow area into a kind of tent, but for true overnight capabilities most people turn to cuddy cabins.

The cuddy cabin boat, especially those with the popular walk-around design, is the next step up in personal dive boats, featuring a small forward cabin that's usually equipped with a built-in head or porta-pottie, and a small V-berth that will sleep two people. Outfitted with a full windshield and a bimini top, cuddy cabin models also offer added protection from the elements, and their larger size tends to give them extended range and comfort for overnight diving/camping trips. They come available with small stoves, sinks, a fresh water system and even showers. While a considerably larger investment than something like an inflatable, these boats greatly extend your range, comfort level and the amount of time you can spend at sea.

Drawbacks to cuddy cabin boats are few, but costly. In general, they tend to be substantially higher in price, and their increased size and weight could very well make unreasonable demands on your present automobile, making it necessary to invest in a new tow vehicle along with the boat.

In recent years a couple of manufacturers have introduced boats designed specifically for diving. The Bayrunner Divemaster 22 and Divemaster 26 are good examples of this trend. These are package boats that are sold ready to go diving. They offer full electronics, ample tank and gear storage, and feature innovative stern platforms for easy entries and exits in full dive gear. All you have to do is fill them with gas and head for the prime dive sites. These boats are currently commanding a premium price, but considering their features and the fact that they are the only boats built with divers in mind, many divers find them to be a good value.

There are many choices to be made when buying a boat for diving. The secret to making a purchase that you will be happy with is to keep your eye on the big picture. By considering all the costs and variables in relation to your diving needs, you can make an intelligent, informed decision. Above all else, realize that there is no need to rush into a purchase. Take your time, be systematic in your decision making process. Go to some boat shows. They are a rich source of information and an invaluable opportunity to do some side by side comparisons. By making a sound investment in a boat that is right for you, you can make all the time you spend on your personal dive boat your happiest ever. ■

Scott Sansenbach is a free-lance writer and photographer living in Anaheim, California.

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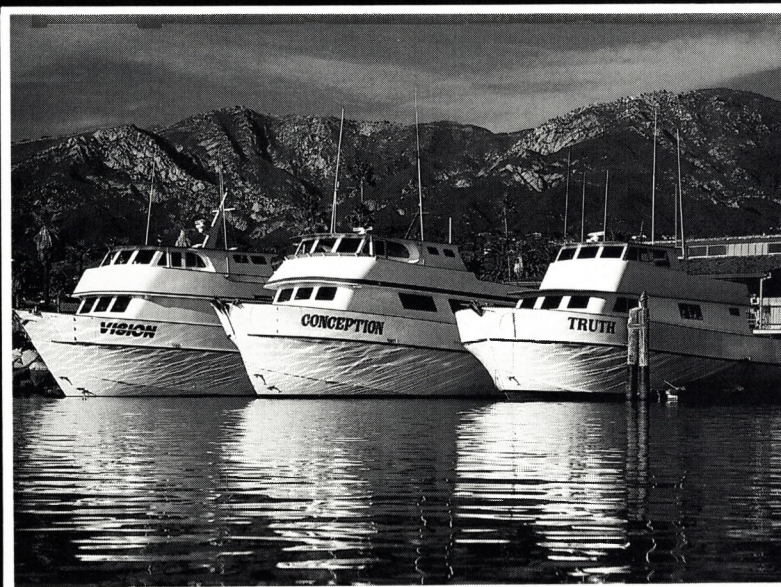
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IN-SEASON

Ocean species in season for the months of May and June

California

Pismo Clams — Minimum size, 5" in greatest shell diameter north of the boundary between San Luis Obispo and Monterey counties; 4½" south of the boundary. Limit, 10. May be taken in Santa Cruz and Monterey counties September 1-April 30. Everywhere else it is open except in clam preserves and marine life refuges.

Abalone — Limits: North of Yankee Point (Monterey County) four in a combination of all species. South of Yankee Point two in a combination of all species. Minimum sizes: reds 7"; greens, pinks and whites 6"; blacks 5"; all other species 4".

Season: North of Yankee Point abalone may be taken only during months of April, May, June, August, September, October and November. South of Yankee Point abalone may be taken during months of March, April, May, June, July, August and September. Between Palos Verdes Point and Dana Point abalone may not be taken at any time of the year.

Striped Bass — Minimum size, 18" total length north of Pt. Conception; no minimum size south of Pt. Conception. Limit, 2.

California Halibut — Minimum size, 22". Limit, 5.

Pacific Halibut — Season: April

1-September 30. Minimum size, 32" total length. Limit, 1.

Lingcod — Minimum size, 22" total length. Limit, 5.

Kelp Bass, Barred Sand Bass, Spotted Sand Bass — Minimum size, 12" total length. Limit, 10 in any combination of species.

White Sea Bass — Minimum size, 28" total length. Limit, 3, except that only one fish may be taken south of Pt. Conception from March 15 to June 15.

Oregon

Halibut — Limit, 2. Seasons and minimum lengths are set annually through the Pacific Halibut Commission.

Lingcod — Limit, 3.

Greenling, Cabezon & Rockfish — Limit, 15 fish in aggregate.

Flounder, Surfperch, Sole & Others — Limit, 25 fish in aggregate.

Abalone — Minimum size, 8". Limit, 3.

Red Rock Crab — Any size or sex. Limit, 24.

Rock Scallops — Limit, 24.

(Whale Cove in Lincoln County is closed to the taking of all fish and shellfish.)

Washington

Abalone — Minimum size, 3½". Limit, 5 per day.

Mussels — Limit, 10 pounds, in the shell.

Octopus — Limit, 2, no irritants or tools allowed in the capture.

Scallops:

Pink — Limit, 20 lbs. or 10 quarts in shell.

Rock — Limit, 12 daily.

Weathervane — Limit, 12 daily, minimum 4" in diameter.

Dungeness Crab — Minimum size, 6¼". Limit, 6 males.

Red Rock Crab — No sex/size restrictions. Limit, 12 per day.

Lingcod/Bottomfish:

Coastal (salmon areas 1-3) — Lingcod: Limit, 3. Open all year. Rockfish: Limit, 15. Open all year. All other bottomfish: No limit. Open all year.

Neah Bay (salmon area 4) — Lingcod: Limit, 3, east, west and south of Tatoosh Island.

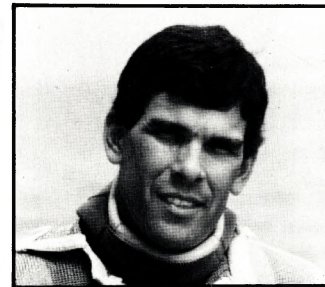
Rockfish: Limit, 15. Open all year. All other bottomfish: No limit. Open all year.

Strait of Juan de Fuca/San Juan Islands (salmon areas 5-7) — Lingcod: Limit, 1. Bottomfish: Limit, 15. (Lingcod count as part of limit, no more than 10 may be rockfish.) Open all year.

Inner Puget Sound (salmon punch card areas 8-13) — Bottomfish: Limit, 15 (with 5 maximum rockfish). Open all year.

STILLED LIFE PHOTOGRAPHY

It's not hard to capture the image of a bat ray or a sea lion when it's hopelessly entangled in a gill net.



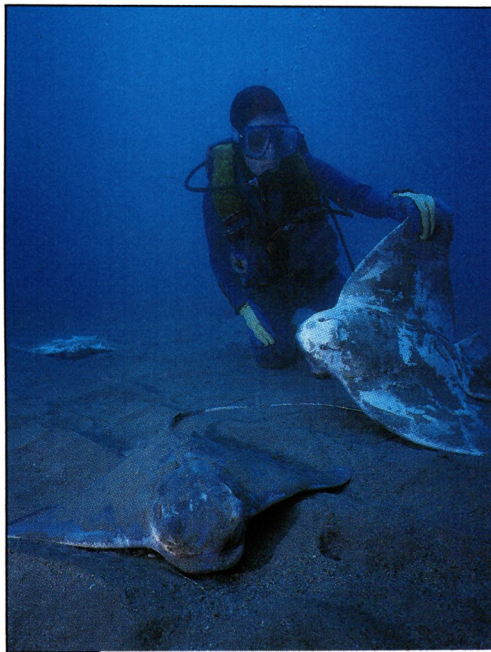
Forty feet below the surface, as the ghostly form of the gill net at Anacapa Island began to materialize in the translucent light of dawn, I realized we had stumbled upon both some good luck and some bad luck. Good luck because the net was filled with animals — bat rays, hundreds of them. Bad luck because I love bat rays and the sight of so many struggling, dying and dead rays caused a vacuum to form in my chest that seemed to suck the joy of life right out of me.

Of course, the fishermen hadn't set their nets for bat rays. In fact, bat rays are an inconvenience to fishermen. They foul the nets and eat up man-hours as fishermen have to stop their work to kill them. Inert rays are easier to handle than live rays, and by killing them they won't foul the nets the following night. It makes good business sense, and fishermen are businessmen.

So here all these bat rays were, innocent creatures that had fallen into that nebulous category referred to by gill-netters as "incidental kills." As I approached the net, it began to move. Law requires some gill nets to be set at night and pulled in at dawn. This minimizes hazards to navigation and prevents sensitive people from being exposed to the unpleasant sight of watching marine life hauled aboard the fishing boat, clubbed to death and then discarded overboard.

Fellow photographer Tom Campbell carried my movie camera while I hurriedly shot a few still photographs. I didn't need much time. There were more than 100 rays in the net and I only needed a good photograph of one of them.

It was much easier to photograph these entangled rays than free ones. Free ones seem always on the move; flying like enormous soaring raptors through forests of amber kelp. I've always wanted to photograph one against that background — delicately lit with the fill light from my wide angle strobe, or as a silhouette — a great underwater bird flying through the golden fronds. When I carry a Nikonos with a 15mm lens around in the kelp forest, I preset the focus and aperture for just such opportunities, but I've never

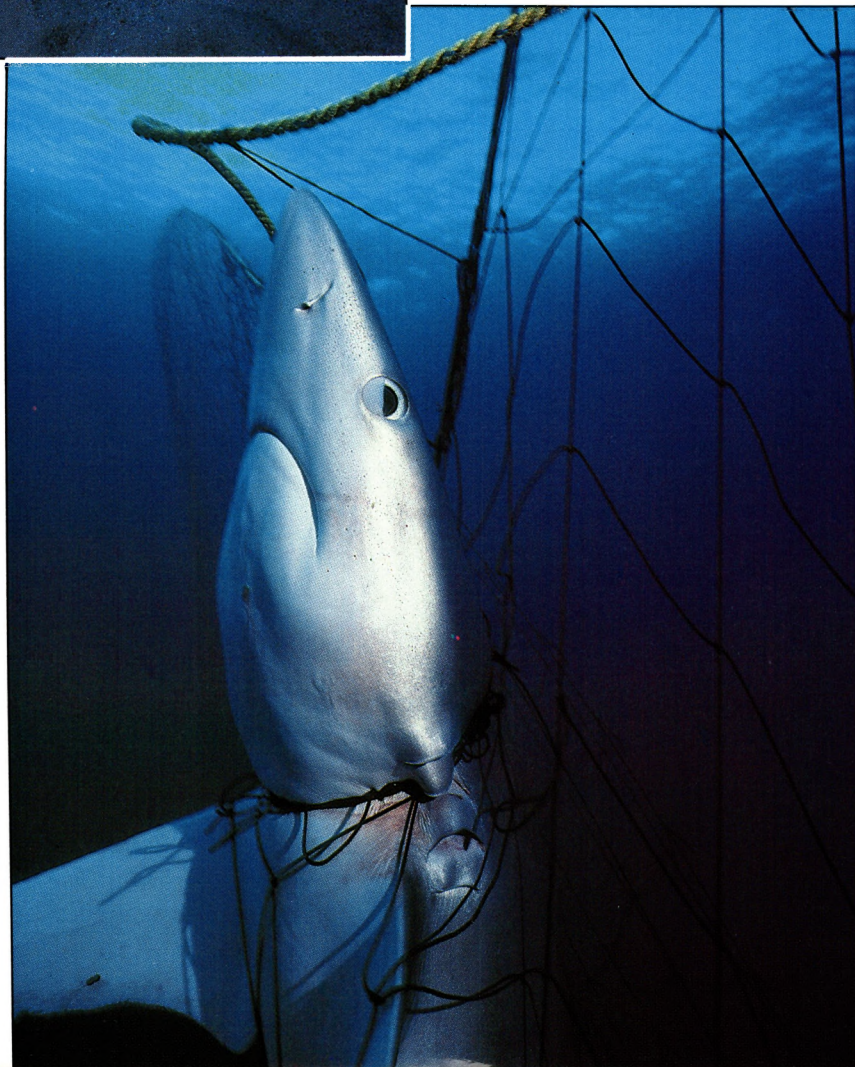


◀ Hundreds of dead bat rays lying around on the sand bottom provide the subjects for some grisly still life shooting.

been quite that lucky with bat rays. However, this morning I didn't need any luck. These bat rays weren't going anywhere. Ever again.

I used my trusty Nikonos III, a 15mm lens, and a single 150 Ikelite strobe. I took a light meter reading on the water behind the net and switched the strobe power to low. My ambient light reading was only f4

Blue sharks are easy to photograph from a shark cage. They're even easier to photograph hanging dead in a drift net. ▼



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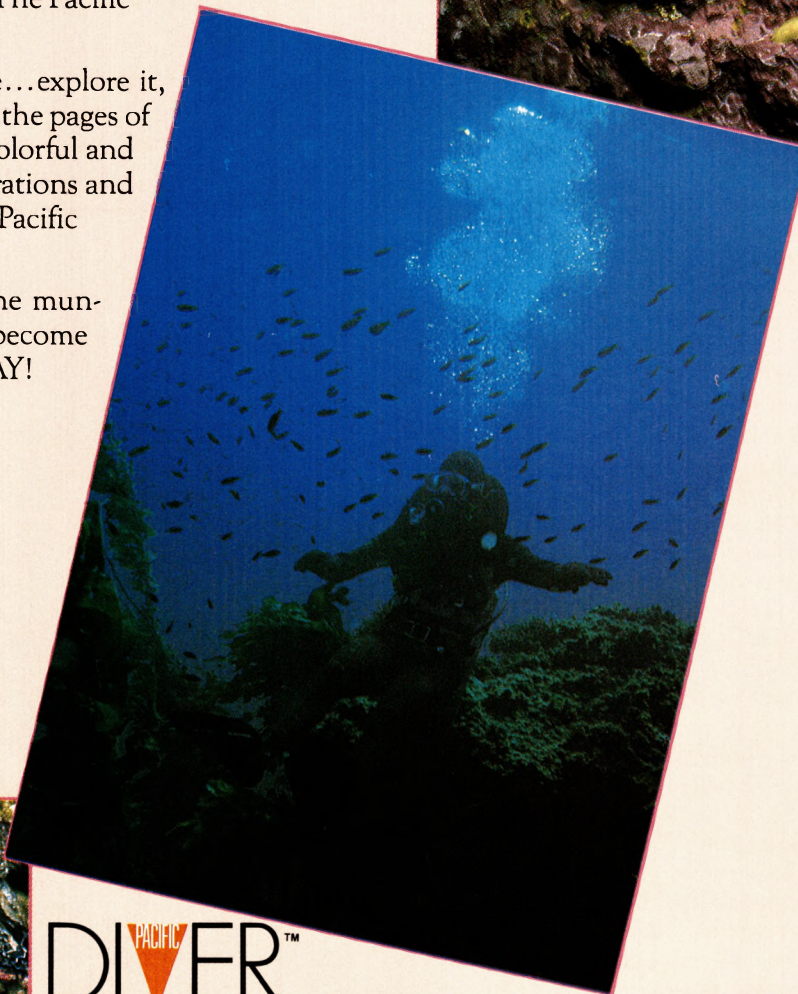
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with Kodachrome 64 film. Even set at low power, the strobe threatened to overwhelm the ambient light. I like a good balance between ambient and fill. I like the colors produced by a strobe, but don't want the use of the strobe to be obvious. Fortunately, I had every opportunity to bracket my aperture setting. After all, my subject was a still life.

I moved to within a few feet and fired off three shots, bracketing the exposures by a full stop. I repeated the procedure one more time and then passed the still camera to Tom and motioned for the movie camera. As the net was drawn toward the fishing boat, I rolled eight or 10 minutes of film. It was an easy job. The still photography was easy, too. But the memory of it all is still rather difficult to grasp.

Later that day we made another dive right where the fishing boat had been anchored. We found plenty of good subject material lying on the sand bottom. Dead bat rays. Hundreds of them. I asked Cindy Campbell to pose for a few shots with the dead rays and took another half dozen stills before moving back to the movie camera. This, too, was easy shooting. The rays weren't moving, and Cindy cooperated by holding still when I wanted her to. Again, I used the 15mm and 150 Ikelite.

I think it's much more creative to use a 15mm or 24mm lens in an underwater housing whenever possible because you have through-the-lens composition. But the Nikons system is much faster to use and easier to carry. So often I compromise creativity for expediency. Actually, I do it too often. But then, photographs of dead bat rays are unlikely to ever grace the pages of a book like "Beneath a Rainbowed Sea."

The next morning we made one more dive, this one on a drift gill net. These horrific nets are cast in open ocean. They run a mile long and 100 feet deep. The nets drift from dusk to dawn, catching anything that passes in the night. There are more than 200 of these mile-long drift nets in use in California waters almost every night.

Fishermen use drift nets to catch swordfish and thresher shark, but on this night there wasn't a single swordfish in the net we were diving on. There were only blue sharks — 50 or 60 of them.

When attracted to bait, blue sharks are easy to photograph from the protective confines of a shark cage. They're even easier to photograph hanging dead in a drift net. I used the same technique and gear as with the bat rays. I didn't hurry my composition; the sharks weren't going anywhere.

Tom and I descended to the bottom of

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the net, followed by film producer David Weiss. At 110 feet we got lucky. The net had caught a "fur ball," which is fishermen lingo for sea lion. It's tough to get people worked up about a bunch of dead blue sharks, but they'll get mad as hell when they start seeing cute and friendly marine mammals being killed off.

Bottom time at 110 feet is rather limited, and we wanted to save some air for finding our way out from beneath the folds of the net drifting above us. So after filming the sea lion, I had little time to shoot my stills. I shot only three frames and I messed them up a bit. I messed them up because I took the strobe off the camera and held it by hand. Even at low power I was afraid I

AT 110 FEET WE GOT
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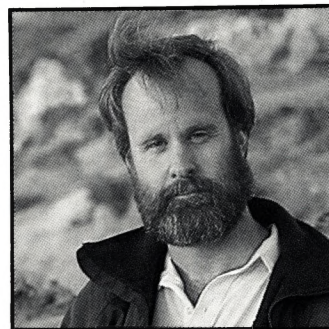
might overexpose the sea lion with the strobe since the dawn light at 110 feet was only f2.8. I wanted to hold the strobe farther away than it was when mounted on the camera. Of course, this was stupid because it's almost impossible to overexpose a sea lion with a strobe. (Sea lion fur drinks up strobe light.) I should have set the shutter speed to a 30th and shot at f4, then bracketed strobe power from low to medium. Most importantly, I should have left the strobe mounted on the camera and pointing in the same direction as the lens. Not only did I underexpose the sea lion, I failed to light its face.

I've done a lot better with live sea lions, and they're really much more difficult because they tend to move around a lot. This sea lion shot should've been easy. After all, it was like photographing a sponge or gorgonian. But even if imperfect, the shot works okay. It doesn't have to be a great artistic shot to grab people's emotions. ■

Howard Hall is a documentary film producer and cinematographer who has won two Emmys for his underwater camera work. The author of the book "Successful Underwater Photography," Hall is currently producing a film about California marine life for the PBS series Nature.

THE BIG LIE

The recent Huntington Beach oil spill provided us with an opportunity to view firsthand our "state-of-the-art" oil spill cleanup technology. And what we saw was shocking.



It happened again. Just when we thought we could finally let those two words — OIL SPILL — drift from our minds like so much stale cigarette smoke, it happened again. This time an oil tanker ran over its own anchor, punctured its hull and dumped close to half a million gallons of crude into the waters of Huntington Beach, California.

Just like up in Alaska's Prince William Sound, the finger pointing started almost immediately. It was British Petroleum's oil, but it was the American Trader Company's tanker. So who was going to clean it up, and how were they going to go about it?

In the last issue of PACIFIC DIVER I wrote about the Alaskan oil spill and the various pieces of cleanup equipment they employed, including booms and skimmers, and how they were supposed to work, in theory at least.

Because the oil spill occurred this time only a quarter mile off the coast of a heavily populated beach city, I, along with thousands of other onlookers, finally got a chance to get a firsthand look at this "state of the art" cleanup equipment in action. And, let me tell you, what I saw was frightening.

Was this an example of our country's most technologically advanced containment and cleanup systems? Are our political leaders serious when they suggest that the 3,000 workers lining the water's edge wiping handfuls of sand with rags represent the ultimate in oil spill science?

Where did the system fail? Or worse, perhaps our system of containment and cleanup simply doesn't exist. To be sure, our inability to effectively contain and clean up the Huntington Beach spill clearly suggests that when it comes to all the talk about being able to control these disasters, we've been fooling ourselves.

Chemical Dispersants Exist But Weren't Used

Theoretically, chemical dispersants are used in the first few days of an oil spill, before the oil drifts ashore. Dispersants are detergents that allow oil and water to mix together into what scientists call an emulsion. Emulsions are able to sink to the sea



In spite of all the equipment on site, after four calm days the oil came ashore anyway.

bed where they eventually disperse. However, as they disperse they become part of the ecosystem, entering the food web when ingested by plankton.

Doesn't sound like such a good idea, does it? Well, consider this: if dispersants are not used and the untreated oil is left to float on the ocean's surface, it is just as toxic and at the whim of surface weather conditions. If left on the surface, eventually the wind will blow the oil ashore, killing the critters there.

In Alaska the use of dispersants was considered an option, but due to poor preparation, the chemicals were not available when they were needed. In Huntington Beach they were available but using them was not even considered. Why?

As it turns out, many factors are taken into consideration when deciding whether to use dispersants or not, including the size of the spill, weather conditions and the type of beach that will be affected if the oil goes ashore.

In Huntington Beach the spill was in open ocean. The beaches were composed of fine-grained sand with few rocky regions. Beautiful Southern California weather blew warm wind offshore for days, increasing evaporation (up to 30 percent of the spill evaporated) and keeping the oil off the beaches while 22 skimmers zig-zagged back and forth trying to pick it all up. Because of the weather conditions and the fact that so much cleanup equipment was on hand, the decision was made that dispersants were not needed at the Huntington Beach spill.

But after four calm days the wind shifted and the oil came ashore. Actually, it wasn't oil, but rather a tar-like goo called mousse, the result of oil floating for four days on the surface in the hot sun. Consequently, much of Huntington's beaches looked like they had been paved by a road crew, while the remaining oil sloshed against the sandy shores. Booms and berms of sand built up by heavy equipment protected the estuaries and tide pools, but in spite of those measures, between 50,000 and 100,000 gallons of thick, tar-like material ended up on the beaches.

The question is, why, with all the cleanup equipment on hand, and with such ideal weather conditions, did any oil come ashore at all?

"State of the Art" Equipment a Major Disappointment

In an oil spill, the first line of defense is containment within a boom. A boom is a long float with a fin, or skirt, that extends below the surface a few feet to contain the oil within its boundaries. Booms were employed around the American Trading Company's leaking tanker and at the en-

trance to sensitive areas like estuaries and tide pools.

There are a number of different kinds of booms. Some are built to withstand the heat of setting the oil on fire and burning it away. Most are filled with foam and are basically unsinkable. (Air-filled booms exist as well, but they have been known to sag or sink, and a sinking boom, obviously, is useless.)

Other factors affect the efficiency of a boom. Choppy seas or too much oil within the boom can result in oil seeping either under the skirt or over the boom. But in the Huntington Beach spill, the seas were flat and the amount of oil in the water was not overwhelming. Still, the

THE QUESTION IS, WHY,
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ALL?

boom that encompassed the leaking freighter was completely ineffective after only a matter of hours. This was realized by spectators lining the shores of Huntington Beach at just about the same time Governor George Dukmajian was on television stating categorically that the most technologically advanced cleanup equipment in the world was on station at the Huntington Beach spill.

Another function of booms is to corral oil into the mouths of skimmers. It is the job of skimmers to actually remove the oil from the water. Two boats, running parallel to each other a few hundred feet apart, run ahead of the skimmer. Each of these lead boats drags a boom whose end is attached to the bow of the skimmer. In this way the oil is funneled into the mouth of the skimmer where it is taken on board. These skimmers are also considered to be part of this "state of the art" technology.

Not surprisingly, much controversy exists as to the effectiveness of these skimmers. One of the problems is that the booms between the lead boats and the skimmer are inefficient. But the main problem is the method in which the skimmer draws the oil out of the water and into storage drums. There seems to be two methods: they can either pump the oil/water mixture out of the water, or pull it up with a conveyor belt system.

With the conveyor system oil sticks to the belt while the excess water flows back into the sea, taking much of the oil with it. Pumping seems to get more of the oil/

water mixture, but since more water is retrieved with the oil the skimmer is forced to off-load more often, creating more toxic waste that has to be disposed of.

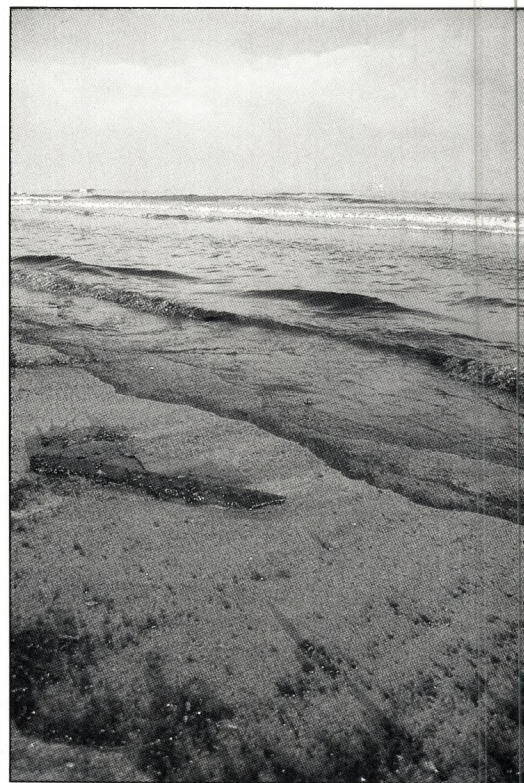
The Yellow Peril: Cleaning up the Beach

Nowhere did the phrase "state of the art" raise more eyebrows than when it was applied to the beach cleaning techniques employed at Huntington Beach. As each high tide retreated, another deposit of oil was left high and dry. So thousands of workers dressed in matching yellow outfits marched out onto the beach and starting wiping up the oil, literally by hand. They used polymer-treated diapers (a slightly larger version of the real thing), pom-poms (they look just like the things school girls shake at football games) and miniature hand-held booms that absorb the oil. After exhausting their supplies of these high-tech cleanup tools, the parade of workers stuffed the soiled rags into plastic bags, threw the bags over their shoulders, and marched off to stockpile the bags up in the beach parking lots, where they were hauled off by trucks to a chemical waste dump.

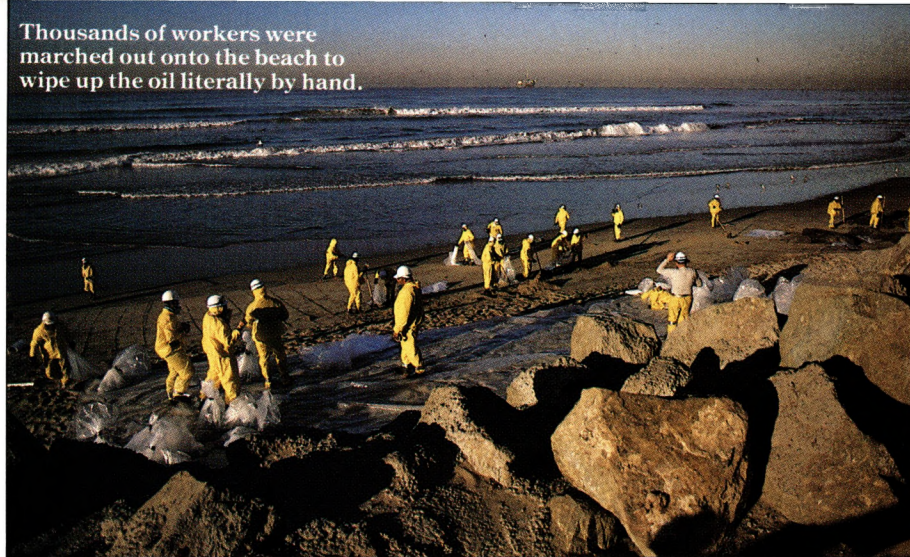
A Respectable Response

It must be said that the response to the Huntington Beach oil spill was immediate. Unlike the Alaska spill where it took Exxon a full day to get organized (and the cleanup crews a full day after that), within hours skimmers, Coast Guard vessels, helicopters and, oh yes, the news media,

As each high tide retreated, another deposit of oil was left high and dry.



Thousands of workers were marched out onto the beach to wipe up the oil literally by hand.



were on the scene in Huntington Beach. During the four days of calm the skimmers crisscrossed offshore while the yellow suited workers marched merrily up and down the beach with their pom-poms and bags of oily rags. But in spite of all the activity, on the fifth day, when the wind changed direction and increased in velocity, in a matter of hours most of the oil ended up on the beach anyway.

After about a week the cleanup crews went home, leaving behind a haggard beach looking like it had been mugged. When it was all over, one estuary, two beaches with tide pools and some rocky

sections of the coastline had been damaged, including some jetties. The death toll to the marine life population is still being tallied.

If we had to have an oil spill, I guess we couldn't have asked for a better place to have it than Huntington Beach, or for more ideal conditions than what we experienced. The question arises, then; under such ideal conditions, why doesn't any of this "state of the art" equipment work any better than it does? With the advent of the Huntington Beach spill we all got a chance to see how effective all of this high tech equipment really is, and after

seeing it in action, I guess what we have learned is that in spite of the rhetoric from oil companies, the cleanup contractors, the U.S. Coast Guard, the governor of California and our President, the truth is that we as a nation are not capable of containing and cleaning up oil spills. All corporate press releases and 30-second television spots to the contrary, that's the simple fact.

Each year 6,000 oil spills are called into the Coast Guard National Response Center. Last year at least six of these calls involved spills of 100,000 gallons or more.

If nothing else, this display of technological impotence is just additional proof that oil as an energy source makes no sense. It pollutes our air, it warms our planet and it poisons our oceans because we have no effective means of containing and cleaning it up when it gets away from us, which it does an average of 16 times a day, every day of every year. I can think of no better reason than that to step up our quest for the development of alternate energy sources, because this one appears to be out of control. ■

Rick Baker studied marine geology at the Moss Landing Institute at Moss Landing, California, and holds degrees in chemical oceanography and geology.

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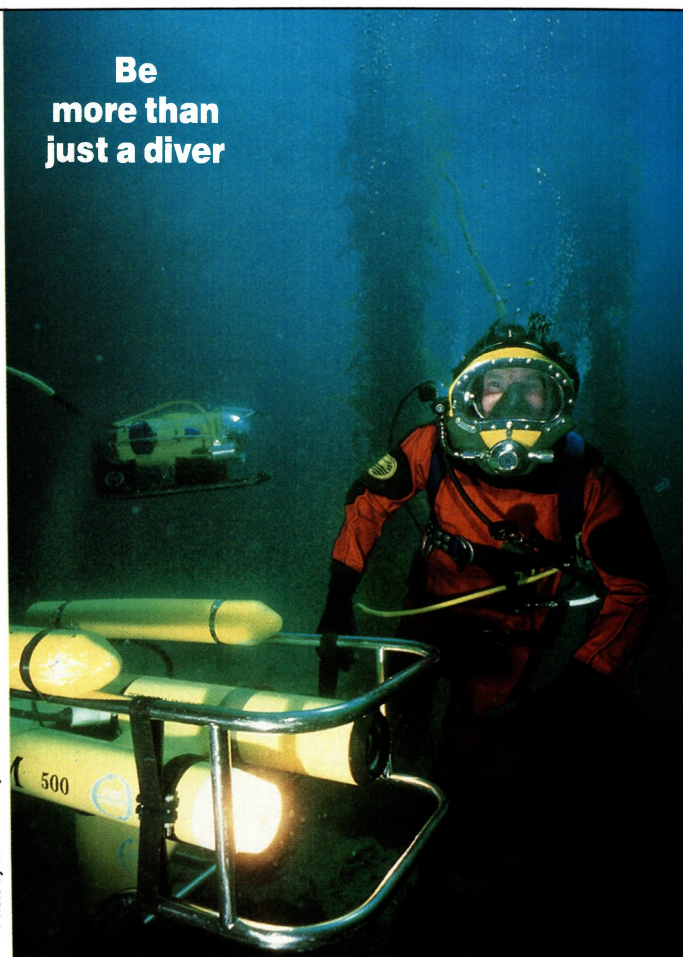


Photo by Steve Barsky

Seal Circus

We were looking for some pinnipeds to play with when they found us. And then the games began!

Article and photos by Gilbert Cruz

Ringling Brothers Circus has its clowns and Nature does too, some of whom take the shape of harbor seals residing in the waters off Mexico's Coronado Islands.

Recently, Al Bruton, Ed Joslyn and I took a dive boat from San Diego Harbor out to the Coronados in hopes of running into some of these playful creatures. Al, a professional diver based in San Diego, knew exactly where to look.

We anchored off Middle Rocks and hit the water, diving directly into a group of harbor seals — four adults and two pups — that were frolicking in the kelp and eel grass. Not wanting to frighten them away, we approached the seals slowly. However, as it turned out, on this particular occasion this precaution proved to be unnecessary. When the seals spotted us they stopped playing and looked at us curiously. Once they realized we were not a threat, they turned back to the business at hand, which was chasing each other around in the kelp.

Within minutes we had eased into their midst, swimming slowly, trying to be as

unobtrusive as possible with our picture-taking. But to our surprise, one of the pups fell in behind and began stalking us! At first I thought I was snagging my fins on kelp, but when I finally turned around, I realized that this little black-spotted fellow was nipping at my fins. Suddenly, I found myself with a new dive buddy.

Wherever I went this little seal went too, following behind me or rocketing past and swinging around out front, stopping, looking over its shoulder to make sure I was following, then cutting back to press its nose to the lens of my camera. Since my Nikkor 20mm lens focuses down to only .9 feet, I am now the proud owner of a number of blurred seal nose shots.

During my adventures with this new buddy I noticed that the older seals were keeping their distance. They would position themselves out of sight right behind or below me. However, in time the distance separating us started to lessen as they became accustomed to my presence.

But the pups were a different matter. They boldly swam in to nip my strobe diffusers and nudge my lens. I took a seat on a rock covered with eel grass hoping to get

some decent close-up shots. As it turned out, I was not disappointed. Within seconds my black-spotted buddy had wrapped its flippers around my foot and was chewing on my fin. After taking my photos, I reached down to scratch the pup's head, and amazingly enough, the animal let me do it, and then came closer so I could scratch its belly! Then suddenly the little guy bolted over and started nipping on Ed's fins. Like a rambunctious child playing in a park, this pup seemed to have an endless supply of energy.

While Ed was working with the two younger seals, I moved over to a large, gray mottled adult. This animal was timid, but still curious enough about what I was doing to move into within a few feet of me, only to dart into the kelp for a game of hide and seek. Whenever I spotted the animal, it would dart past me and disappear, only to wait for me to swim near again. One time I swear the seal didn't see me, but I could see its rear half behind a large rock. So I swam up to it with my camera ready. When I was about two feet away I raised my camera, just as the seal turned around. The flash from my strobe



As I took a seat on some eel grass my black-spotted buddy came up and started chewing on my fin.



Once the seals realized we were not a threat they took to chasing each other — and us — around in the kelp.

surprised the seal; its eyes widened and it pushed straight up off the bottom into a tangle of kelp. I thought I had scared the poor animal away, but after a few seconds the seal reappeared, settled on top of a rock and watched to see what I would do next.

By this time I had about 1,000 pounds of air left, which meant it was time to locate Al and Ed. As I swam off to look for them, my black-spotted little friend showed up again and followed me into the eel grass where the other seals were. I found Al and Ed and we continued to take pictures and shoot video footage until our air was exhausted.

Two of the seals followed us back to the boat, then disappeared. Since we seemed to be on a roll with these animals, we decided to make a quick change of tanks and go right back in. But when we hit the water for our second dive, the seals were gone.

We swam around where we had spotted them before, but we ran into only the black-spotted pup. This little ham was not

ready to rest, so we played with it for a while longer. The pup seemed to take a real liking to Al. It moved up close and rested its head in Al's arms and allowed Al to rub its belly. But then just as suddenly as it had appeared, the little seal was gone, and we were alone in the water. We swam back to the boat to recount our experiences.

Diving with seals is an experience that almost any diver would cherish. But in order to dive with seals you first have to gain their confidence. To do this, avoid aggressive behavior. Act as though you don't see them, and move slowly to show that you mean them no harm. Above all, have patience. If you are comfortable being around them, they're more apt to be comfortable around you. And if all goes right, after a careful approach you might find yourself with a bunch of new diving friends.

Gilbert Cruz is a writer and photographer based in Pleasanton, California.

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DIVE TRAVEL NEWS

Ocean Spirit Expands Its Scuba Diving Fleet

Ocean Quest Intl. has announced the addition of two more specially designed scuba diving boats on board its 457-foot dive/cruise ship *Ocean Spirit*. This brings the number of 32-foot dive boats in *Ocean Spirit's* fleet to 10. The additional boats permit *Ocean Spirit* to widen its variety of scuba diving programs, and to help keep certain boats reserved exclusively for either novice or expert divers, for specific training courses or underwater photography.

Ocean Spirit's dive boats can travel at 20

miles per hour fully loaded. They each carry 42 tanks that can be refilled in less than 10 minutes when the boats' manifold systems are hooked to the world's largest recreational air filling system which is in place on the mother ship.

Ocean Spirit's unique air filling system, and in fact its entire scuba diving program, was designed and installed under the supervision of Bret Gilliam, Ocean Quest Intl.'s director of diving operations. Gilliam, 38, has been with Ocean Quest since its inception in 1988, and heads a professional dive team that includes 40

instructors, dive masters, technicians, engineers and medical staffers. A lifetime member of NAUI and an instructor for PADI and NASDS, he additionally holds USCG Merchant Marine licenses as Master and submersible pilot, and he is a certified recompression chamber supervisor.

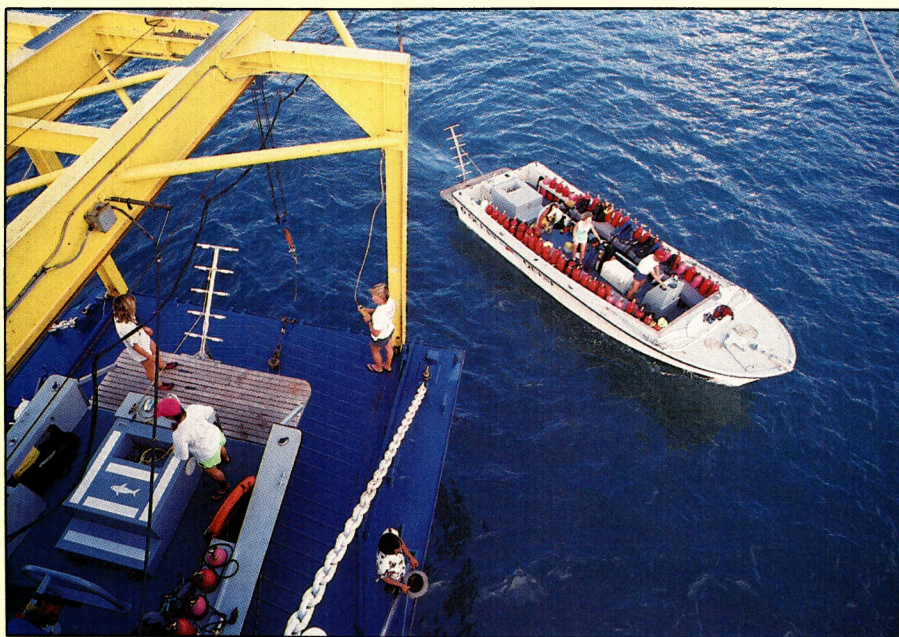
A 19-year veteran of the diving industry with a diversified background that includes military/commercial diving and live-aboard diving vessel operations, Gilliam was the founder of V.I. Divers Ltd., Ocean Tech Inc. and Southern Exposure Publishing in the Virgin Islands.

Since he has been with Ocean Quest, Gilliam not only designed the scuba air filling system, but he is currently sponsoring the broadest study on multi-level dive computers in actual human wet dives that will reach a 50,000 dive database by the end of this year. He has also developed one of the first certification specialty courses for sport divers in recompression chamber operations and dive accident management.

In addition to his duties aboard *Ocean Spirit* Gilliam is also an accomplished underwater photographer whose works have appeared in most major dive publications as well as *Time*, *Life*, *People*, *National Geographic*, *Playboy* and *Geo*. He divides his time between homes in Maine and the Virgin Islands when not aboard the *Ocean Spirit*. His 70-foot dive yacht *Encore* traverses the Caribbean and New England on charter photography assignments.

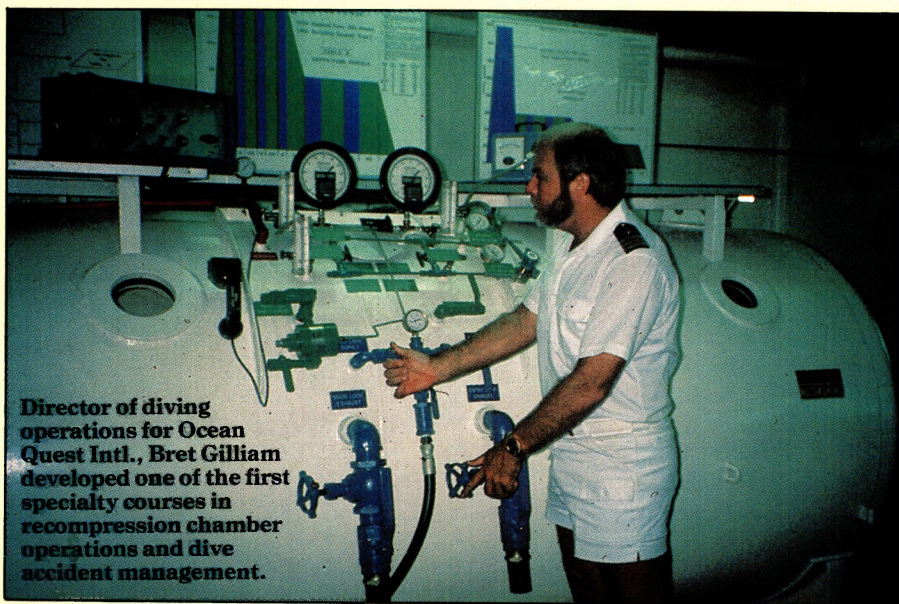
While Gilliam is generally credited with developing the technical and hardware-oriented aspects of *Ocean Spirit's* widely-respected diving operation, one of his lesser-acknowledged accomplishments has been his ability to pull together a superb team of enthusiastic, motivated and good-natured dive personnel to staff *Ocean Spirit's* dive programs and see to their day-to-day operations. Most anyone who has had the opportunity to travel and dive aboard *Ocean Spirit* will agree that one of the most enjoyable parts of any *Ocean Spirit* cruise, in addition to the excellent dive sites and the efficient dive operation, is the interaction with the energetic, fun-loving and thoroughly professional dive staff.

Ocean Spirit sails every Sunday from St. Petersburg, Florida, for Belize, Guanaja, Roatan and Cozumel. For more information or reservations, contact Ocean Quest Intl. at 512 Peters St., New Orleans, LA 70130; (800) 338-3483, or (504) 586-8686.



STEVE ESSIG

Two additional dive boats enable *Ocean Spirit* to expand its already highly regarded scuba diving program.



OCEAN IMAGES

Director of diving operations for Ocean Quest Intl., Bret Gilliam developed one of the first specialty courses in recompression chamber operations and dive accident management.

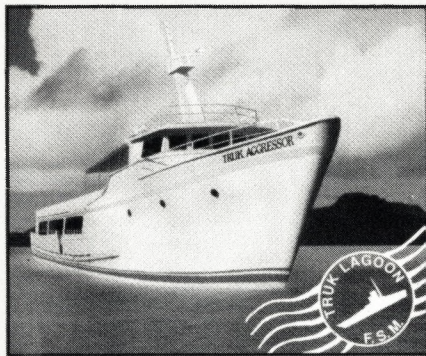
DIVE TRAVEL NEWS

Truk Aggressor Offers the Ultimate in South Pacific Diving Plus Shore Excursions

The legendary diving of Truk Lagoon is now accessible via the new 120-foot live-aboard dive vessel *Truk Aggressor*.

The *Truk Aggressor's* seven-day charters offer both first-rate diving and interesting shore excursions for a rounded experience of Micronesia's Truk Lagoon. For example, a Trukese barbecue lunch is offered under the palm trees of Eten Island, an area that was Japan's largest fighter base during World War II. Also included are excursions to Dublon Island and Osakura Island and an evening of local entertainment that includes "talk stories" of native legends of the islands and the lagoon.

Underwater, *Truk Aggressor* divers get to visit a rare "Emily Flying Boat," World War II wrecks, untouched outer reefs and walls and "Shark City," where it is common to encounter gray reef, white tips, black tips, oceanic silver tips and a yet "unidentified species of shark that is currently under study. Truk Lagoon visibility averages 60 to 100 feet around the wrecks and exceeds



Truk Aggressor.

200 feet on the outer reefs and walls. Water temperatures average 80 to 85 degrees.

Special features aboard the *Truk Aggressor* include a large dive platform, 10 double staterooms with private heads and showers, a dining salon, a lounge with a dance floor, a wet bar, an entertainment center with a film library, a sundeck with a barbecue and a photo center with E-6 lab and video editing.

Truk Aggressor charters run from Sunday to Sunday. For more information, contact Aggressor Fleet Ltd., P.O. Drawer K, Morgan City, LA 70381; (800) 348-2628.

Sea Dancer Returns to Turks & Caicos Islands

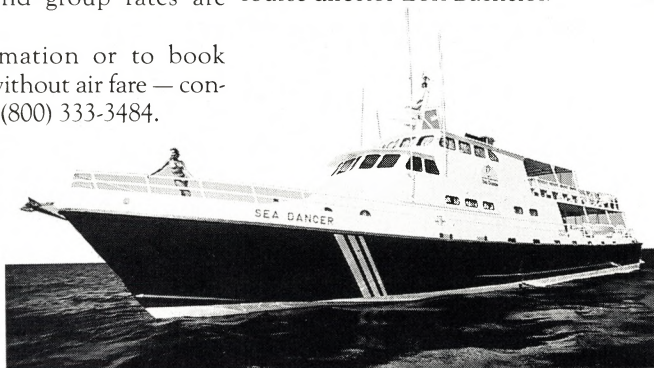
After spending nearly a year exploring the waters of St. Maarten, Saba, St. Eustatius and St. Kitts, the Peter Hughes Diving/Divi Resorts' 110-foot live-aboard *Sea Dancer* has returned to the Turks & Caicos Islands.

Operating out of Providenciales (known as Provo), *Sea Dancer's* Saturday to Saturday dive trips journey to the waters of West Caicos Island with deep-water wall diving and encounters with dolphins, tuna, reef sharks and eagle rays. During the spring and fall migrating humpback whales are also a common sight.

Sea Dancer accommodates 18 divers in nine air-conditioned double cabins. Rates for one week, all-inclusive trips currently range from \$1,095 to \$1,295 per person. Special charter and group rates are available.

For more information or to book passage — with or without air fare — contact Mick Lumb at (800) 333-3484.

Sea Dancer accommodates 18 divers on trips to the Turks & Caicos Islands.



CPD Offers 3-Week Instructor's Certification on Maui

Central Pacific Divers (CPD) of Lahaina, Maui, is offering a three-week instructor training program for divers serious about pursuing a career in the dive industry. Beginning June 1, CPD will take divers with advanced certification and put them through Rescue Diver, Dive Master and Instructor development courses in preparation for their PADI Instructor Examination on June 20-21.

CPD's classroom, pool and two spacious dive boats are all within walking distance of each other in the historical seaside town of Lahaina. Complete accommodation packages are available.

For reservations or more information, contact Central Pacific Divers at (800) 551-6767 or (808) 661-8718, and ask for course director Lori Bachelor. ■

San Diego

Scuba Diving Charters

Dive With Sea Lions at Mexico's Coronados Islands. Experience the Kelp Forest of La Jolla and Pt. Loma. Thrill at the Sight of the Wreck of the *El Rey*. Tanks, Weights & Snacks Included.

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Capt. Rich Cassens

(619) 584-0742



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- Loreto • Australia • Micronesia
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- All Arrangements Made by an Experienced Scuba Diving Travel Professional

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August 25-Sept. 1 Bonaire
November 3-10 Cozumel
March 1991 Truk/Fiji



Scuba World Travel

(800) 752-1144

(805) 985-8232

DIVE BOAT SCHEDULES

MONTEREY

Cypress Sea, 408/244-4433
Breakwater Cove Marina
50/20 Divers/Capt. Mark Vandenberg
All trips to Monterey/Carmel areas.
Available daily.

May:

- 5 Steele's Dive Shop, 415/682-5082
- 6 A.M. Any Water Sports, 408/244-4433
- P.M. Irwin-McGuire class, 408/244-4433
- 12 Divemasters, 415/969-7782
- 13 Any Water Sports, 408/244-4433
- 19 A.M. Wallins Dive Shop, 415/369-2131
- P.M. Tom Condy class, 408/244-4433
- 20 Anchor Shack, 415/825-4960
- 26 Ocean Odyssey, 916/758-3483
- 27 Fremont Scuba, 415/438-9196
- 28 Any Water Sports, 408/244-4433

June:

- 2 Steele's Dive Shop, 415/682-5082
- 3 Any Water Sports, 408/244-4433
- 8 Any Water Sports, 408/244-4433
- 9 Divemasters, 415/969-7782
- 10 Flipper Dippers, 408/280-1010
- 16 Wallins Dive Store, 415/369-2131
- 17 Anchor Shack, 415/825-4960
- 22 Any Water Sports, 408/244-4433
- 23 Ocean Odyssey, 916/758-3483
- 24 Fremont Scuba, 415/438-9196

Silver Prince, 408/394-4235
Monterey Wharf II
40/16 Divers/Capt. Gary Goulart
Call number above for open boats.

May:

- 4 Open Boat
- 5 A.M. Pinnacles Dive Center, 415/897-9962
- 6 All Day: Landfall Productions, 415/651-6499
- 11 Open Boat
- 12 A.M. Undersea Adventures, 415/838-2348
- 13 A.M. Valley Skin & Scuba, 209/333-2343
- 18 Open Boat
- 19 A.M. Valley Aquatics, 209/527-2822
- P.M. Pacific Offshore Divers, 408/265-3483
- 20 All Day: Scuba Town, 415/939-3483
- 25 Open Boat
- 26 A.M. Bamboo Reef, 415/362-6694
- 27 A.M. Stan's Dive Shop, 408/998-0767

June:

- 1 Open Boat
- 2 A.M. Pinnacles Dive Center, 415/897-9962
- 3 A.M. Valley Skin & Scuba, 209/333-2343
- P.M. Olympic Dive & Travel, 415/933-6045
- 8 Open Boat
- 9 A.M. Undersea Adventures, 415/838-2348
- 10 A.M. Get Down Divers, 408/438-3795
- P.M. Olympic Dive & Travel Staff
- 15 Open Boat
- 16 A.M. Landfall Productions, 415/651-6499
- P.M. Pacific Offshore Divers, 408/265-3483
- 17 All Day: Scuba Town, 415/939-3483
- 22 Open Boat
- 23 A.M. Bamboo Reef, 415/362-6694
- 24 A.M. Stan's Dive Shop, 408/998-0767
- P.M. Undersea Adventures,



H&M LANDING, SAN DIEGO

415/838-2348
29 Open Boat
30 A.M. Valley Aquatics, 209/527-2822

July:

- 1 A.M. Amer Aquatic Adventures, 209/578-0515
- P.M. Landfall Productions, 415/651-6499
- 6 Open Boat
- 7 A.M. Pinnacles Dive Center, 415/897-9962
- 8 A.M. Stan's Dive Shop, 408/998-0767
- P.M. Olympic Dive & Travel, 415/933-6045
- 13 Open Boat
- 14 A.M. Undersea Adventures, 415/838-2348
- 15 All Day: Scuba Town, 415/939-3483
- 20 Open Boat
- 21 A.M. Valley Aquatics, 209/527-2822
- P.M. Pacific Offshore Divers, 408/265-3483
- 22 A.M. Stan's Dive Shop, 408/998-0767
- P.M. Olympic Dive & Travel, 415/933-6045
- 27 Open Boat
- 28 All Day: Bamboo Reef, 415/362-6694
- PDC Connie Night Dive, 415/965-8302
- 29 A.M. Valley Skin & Scuba, 209/333-2343
- P.M. Undersea Adventures, 415/838-2348

Xeno, 408/426-7376

38/6 Divers/Capt. Jon Capella
Available seven days a week.

SANTA BARBARA

Conception, 805/962-1127, 805/963-3564

Sea Landing Breakwater
75/40 Divers/Capt. Jerry Boylan

May:

- 11-12 Tom Campbell's Dive & Travel, 805/965-4951
- 13-17 Available for Charter, 805/962-1127
- 18-19 Any Water Sports, 408/244-4433
- 20-21 Fremont Dive Center, 415/657-1004
- 23-24 UC Berkeley, 415/642-1298
- 26-28 Ocean Odyssey, 408/475-3483
- 29-30 UC Santa Cruz, 408/462-5409

June:

- 1-2 Discovery Charters (1/2), 818/790-8276
- BENT Dive Club (1/2), 213/375-7121
- 3-4 Dive Shop of Santa Maria, 805/922-0076
- 5-7 Available for Charter, 805/962-1127
- 8-9 Dave Faught, 408/358-3221
- 10-11 Dive 'n Surf, 213/372-8423
- 12-13 Available for Charter, 805/962-1127
- 14-16 Just Another Great Dive,

- 415/668-4326
- 17-21 Available for Charter, 805/962-1127
- 22-23 Truth Aquatics Dive, 805/962-1127
- 24-25 California Sport Divers, 415/965-8302
- 26-28 Available for Charter, 805/962-1127
- 29-6/2 Aqua Adventures, 818/848-2163
- July:
- 3-7 Truth Aquatics Dive, 805/962-1127
- 8-9 Original Steeles (1/2), 415/655-4344
- Pinnacles Dive Center (1/2), 800/223-4837
- 10-12 Available for Charter, 805/962-1127
- 13-14 San Diego UPS, 619/560-5621
- 15-16 Any Water Sports, 408/244-4433
- 17-18 Available for Charter, 805/962-1127
- 22-24 Scuba Discoveries, 415/777-3483
- 26-28 High Sierra Divers, 916/477-7642
- 29-31 Ocean Odyssey (1/2), 916/758-3483
- Sports Cove (1/2), 707/448-9454

Truth, 805/962-1127, 805/963-3564
Sea Landing Breakwater
68/40 Divers/Capt. Bill Yznaga

Call numbers above for open boats.

May:

- 5-6 Aqua Adventures, 818/848-2163
- 9 Open Boat
- 10-12 Ocean Funatics, 408/427-1620
- 13-15 Available for Charter, 805/962-1127
- 16 Open Boat
- 17 Open Boat
- 19-21 Flipper Dippers (1/2), 408/358-3995
- Peninsula Diving Center (1/2), 415/965-2241
- 23 Marine Tech '67, 805/965-0581
- 24 Open Boat
- 26-28 Pinnacles Dive Shop, 800/223-4837
- 29 Marine Tech 1, 805/965-0581
- 30 Open Boat
- 31 Open Boat

June:

- 1-2 San Diego UPS, 619/560-5621
- 3-5 Available for Charter, 805/962-1127
- 6 Open Boat
- 7 Open Boat
- 8-9 Scuba Duba Dive, 818/881-4545
- 10-12 Available for Charter, 805/962-1127
- 13 Open Boat
- 14 Open Boat
- 15-16 L.A. UPS, 213/545-0513
- 17-19 Available for Charter, 805/962-1127
- 20 Open Boat
- 21 Open Boat
- 22-23 Any Water Sports, 408/244-4433
- 24-25 Saltwater Revival, 415/661-5540
- 27 Open Boat
- 28 Open Boat
- 30-73 Lodi Valley Skin Diving (1/2), 209/333-2343

- Olympic Scuba School (1/2), 415/933-6045
- July:
- 4 Open Boat
- 5 Open Boat
- 6-7 Desert Divers Supply, 702/438-1000
- 8-10 Available for Charter, 805/962-1127
- 11 Open Boat
- 12 Open Boat
- 13-14 Truth Aquatics Dive, 805/962-1127
- 15-17 Available for Charter, 805/962-1127
- 18 Open Boat
- 19 Open Boat
- 20-21 Glendale UPS, 213/485-6008
- 22-24 Available for Charter, 805/962-1127
- 25 Open Boat
- 26 Open Boat
- 27-28 Aqua Adventures, 818/848-2163

Vision, 805/962-1127, 805/963-3564

Sea Landing Breakwater
90/40 Divers/Capt. Robbie Church

May:

- 2 Marine Tech '67, 805/965-0581
- 4-6 Marin Skin Diving, 415/479-4332
- 7-9 Available for Charter, 805/962-1127
- 10 Private Charter
- 11-12 Discovery Charters, 818/790-8276
- 13 Open Boat
- 26-28 Blue Fins Dive Club, 213/391-0948
- 29-30 UC Santa Cruz, 408/462-5409

June:

- 1-2 Bill Finstad, 415/949-0344
- 3-5 Marin Skin Diving, 415/479-4332
- 7-9 Aqua Adventures, 818/848-2163
- 10-11 Truth Aquatics Dive, 805/962-1127
- 12-13 Available for Charter, 805/962-1127
- 17-20 Dolphin Scuba, 916/929-8188
- 22-25 Adventure Sports, 408/458-3648
- 26-28 Available for Charter, 805/962-1127
- 29-30 Wet Pleasure, 408/984-5819

July:

- 1-4 Bill Finstad, 415/949-0344
- 6-7 Tom Campbell's Dive & Travel, 805/965-4951
- 8-10 InterOcean Tours, 415/444-5833
- 15-17 Marin Skin Diving, 415/479-4332
- 18 Catalina Chamber Day
- 19-21 Discovery Charters, 818/790-8276
- 26-28 Bill Finstad, 415/949-0344
- 29-30 Original Steeles (1/2), 415/655-4344
- Pinnacles Dive Center (1/2), 800/223-4837
- 31-8/4 Dublin Scuba Center, 415/833-2518

VENTURA

Chieftain, 805/652-0321

Ventura Harbor
50/20 Divers/Capt. David Rentfrow

Call number available dates.
Charters to Santa Cruz & Anacapa Islands. Group rates available.

Liberty, 805/483-6612, 805/642-1233

Ventura Harbor Village
85/40 Divers/Capt. Phil Bardini
Call for available dates.

Peace, 805/658-8286

Ventura Harbor Village
65/32 Divers/Capt. Bill Magee, Mike Roach
Call number above for open boats.

May:

- 2 Santa Rosa: Open Boat
- 5 Channel Islands Scuba, 805/644-3483
- 6 West Coast Divers Supply, 818/708-8136
- 9 Gull Island: Open Boat
- 10-12 A&B Undersea, 415/485-1700
- 12 Channel Islands Scuba, 805/644-3483
- 13 Santa Cruz: Open Boat
- 16 Santa Rosa: Open Boat
- 17 Santa Cruz: Open Boat
- 18-19 T.R.W., 213/372-7764
- 20-21 Five Star Instructional Group, 213/456-3483
- 23 Gull Island: Open Boat
- 24 Santa Cruz: Open Boat
- 26-28 World Sea Adventures, 916/487-7433
- 30 San Miguel: Open Boat
- 31 Santa Cruz: Open Boat

June:

- 2 West Coast Divers Supply, 818/708-8136
- 3 Antelope Valley Desert Divers, 805/947-0863
- 6 San Nicolas: Open Boat
- 7 Santa Cruz: Open Boat
- 9 Star Instruction Group, 213/456-3483
- 10 Channel Islands UPS, 805/644-3540
- 13 Santa Rosa: Open Boat
- 14 Santa Cruz: Open Boat
- 15-16 Sea Sons (1/2), 714/735-3284
- Don's Dive Shop (1/2), 707/763-7428
- 17-18 Robert Park Dive Center, 707/584-2323
- 19-20 San Miguel/Santa Rosa: 6th Annual Halibut Hunt, 805/658-8286
- 21 Santa Cruz: Open Boat
- 23 Scuba Escape, 213/391-3119
- 24-25 Island Packers, 805/642-1393
- 27 San Miguel: Open Boat
- 28 Santa Cruz: Open Boat
- 29-30 Star Instructional Group, 213/456-3483

July:

- 1-3 World Sea Adventures, 916/487-7433
- 4 Santa Rosa: Open Boat
- 8-9 Santa Monica Bluefins, 805/499-6929
- 11 Gull Island: Open Boat
- 12 Santa Cruz: Open Boat
- 13-14 Scuba Escape, 213/391-3119
- 15-16 Star Instructional Group, 213/456-3483
- 18 San Miguel: Open Boat
- 19 Santa Cruz: Open Boat
- 20-22 World Sea Adventures, 916/487-7433
- 24-25 Santa Cruz/Santa Rosa: 6th Annual Halibut Hunt, 805/958-8286
- 26 Santa Cruz: Open Boat
- 27-28 Star Instructional Group, 213/456-3483
- 29-30 Island Packers, 805/642-1393

Scuba Luv'er,

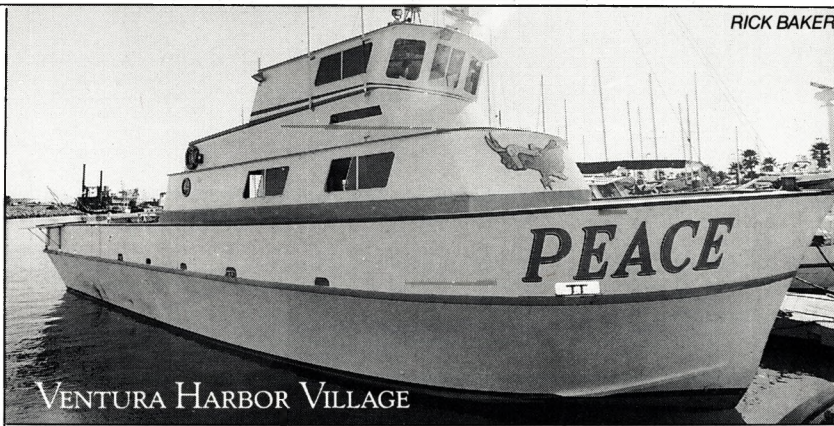
800/227-3018/805/496-1014

Ventura Harbor Village
65/12-34 Divers/Capt. Phil Bardini
Call numbers above for Mid-Week Specials.

May:

- 1 Mid-Week Special
- 4 Anacapa: Scuba Luv Aquatics, 818/346-4799
- 5 Santa Cruz: Capt. Frog, 805/833-3281

DIVE BOAT SCHEDULES



RICK BAKER

VENTURA HARBOR VILLAGE

- 6 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 9 Mid-Week Special
- 11 Shark Dive: Scuba Luv Aquatics, 818/346-4799
- 12 Gull Island: Scuba Luv Aquatics, 818/346-4799
- 13 Mothers Day Dive: Scuba Luv Aquatics, 818/346-4799
- 16 Mid-Week Special
- 18 Anacapa: Scuba Luv Aquatics, 818/346-4799
- 19 Sport Chalet, 818/790-9800
- 20 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 23 Mid-Week Special
- 25 Shark Dive: Scuba Luv Aquatics, 818/346-4799
- 26 Santa Barbara: Scuba Luv Aquatics, 818/346-4799
- 27 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 30 Mid-Week Special

June:

- 1 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 2 Gull Island: Scuba Luv Aquatics, 818/346-4799
- 3 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 6 Mid-Week Special
- 8 Shark Dive: Scuba Luv Aquatics, 818/346-4799
- 9 Oil Rig Dive: Scuba Luv Aquatics, 818/346-4799
- 10 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 13 Mid-Week Special
- 15 Anacapa: Scuba Luv Aquatics, 818/346-4799
- 16 Santa Barbara: Scuba Luv Aquatics, 818/346-4799
- 17 Fathers Day Dive: Scuba Luv Aquatics, 818/346-4799
- 20 Mid-Week Special
- 22 Shark Dive: Scuba Luv Aquatics, 818/346-4799
- 23 San Miguel: Scuba Luv Aquatics, 818/346-4799
- 24 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 27 Mid-Week Special
- 29 Anacapa: Scuba Luv Aquatics, 818/346-4799
- 30 Capt. Frog, 805/833-3281

July:

- 4 Mid-Week Special
- 6 Shark Dive: Scuba Luv Aquatics, 818/346-4799
- 7 Painted Caves: Scuba Luv Aquatics, 818/346-4799
- 8 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 11 Mid-Week Special
- 13 Cavern Point: Scuba Luv Aquatics, 818/346-4799
- 14 Capt. Frog, 805/833-3281
- 15 Santa Cruz: Scuba Luv Aquatics, 818/346-4799
- 18 Mid-Week Special
- 20 Shark Dive: Scuba Luv Aquatics, 818/346-4799
- 21 Oil Rig Dive: UPS, 213/385-7381
- 22 Santa Cruz Wrecks: Scuba Luv Aquatics, 818/346-4799
- 25 Mid-Week Special
- 27 Anacapa: Scuba Luv Aquatics, 818/346-4799
- 28 Sports Chalet, 818/790-9800
- 29 Santa Cruz: Scuba Luv Aquatics, 818/346-4799

Spectre, 805/483-6612, 805/642-1233

Ventura Harbor Village
85/36 Divers/Capt. Ted Cumming
Call numbers above for open boats.

May:

- 5 Santa Cruz: Blue Cheer, 213/828-1217
- 6 Santa Cruz: Scuba Duba Dive, 818/881-4545
- 12 Santa Cruz: Blue Cheer, 213/828-1217
- 13 Santa Cruz: Santa Barbara Aquatics (1/2), 805/964-8689
- MDR Divers, 213/827-1131
- 18 Capt's Choice: Explorer's Club, 805/483-6612

- 19 Anacapa/Santa Cruz: L.A. UPS, 213/545-0513
- 20 Anacapa/Santa Cruz: Blue Cheer, 213/828-1217
- 26 Santa Ana College, 714/693-8694
- 27 Anacapa/Santa Cruz: Far West Marine, 805/495-3600
- 28 Santa Barbara: Channel Islands Scuba, 805/644-3483

CHANNEL ISLANDS

Sandy Bay, 213/828-2418

32/6 Divers/Capt. Bob Perry
Call for available dates.

PORT HUENEME

Sea Ventures, 805/985-1100

Sportfishing Landing
55/28 Divers/Capt. Mickey Defazio
Call for available dates.

SAN PEDRO

Atlantis, 213/831-6666

22nd St. Landing
65/35 Divers/Capt. Brian Dull
Call number above for open boats.

May:

- 5 Sport Chalet, 818/790-9800
- 6 Pacific Sculptins, 213/494-2521
- 12 Sport Chalet, 818/790-9800
- 13 B.E.N.T., 213/375-7121
- 19 Sport Chalet, 818/790-9800
- 20 Black Barts, 714/855-2323
- 26 Sport Chalet, 818/790-9800
- 27 Marina del Rey Divers, 213/827-1131
- 28 Pasadena Scuba (1/2), 818/796-2000
- Openwater Habitat (1/2), 714/744-8355

June:

- 2 Sport Chalet, 818/790-9800
- 3 Ski & Sport, 714/633-1880
- 9 Sport Chalet, 818/790-9800
- 10 Ski & Sport, 714/633-1880
- 16 Sport Chalet, 818/790-9800
- 17 Available for Charter, 213/831-6666
- 23 Pacific Sculptins, 213/494-2521
- 24 Marine del Rey Divers, 213/827-1131
- 30 Sport Chalet, 818/790-9800

Bold Contender, 818/366-2611

22nd St. Landing
65/34 Divers/Capt. Jerry Shapiro
Call for available dates.

Cee Ray, 213/519-0880, 213/867-9738

22nd St. Landing
65/32 Divers/Capt. Arnold Lancaster

May:

- 3 Catalina Chamber Day
- 6 San Clemente: Reef Seekers, 213/652-4990
- 12 San Clemente: Sport Chalet, 818/790-9800
- 13 San Clemente: Santa Monica Bluefins, 213/391-0948

- 19 San Clemente: Sea Sabres, 213/947-0625
- 20 Catalina: Sport Chalet, 818/790-9800
- 26 Catalina: Sport Chalet, 818/790-9800
- 27 Available for Charter, 213/519-0880
- 28 San Clemente: Sport Chalet, 818/790-9800

June:

- 3 Catalina: Sport Chalet, 818/790-9800
- 9 Farnsworth: Santa Monica Bluefins, 213/391-0948
- 10 Catalina: Sport Chalet, 818/790-9800
- 17 Farnsworth: Sea Sabres, 213/947-0625
- 24 Catalina: Sport Chalet, 818/790-9800
- 30 Marina del Rey Divers, 213/827-1131

July:

- 1 Santa Barbara: Santa Monica Bluefins, 213/391-0948
- 4 Catalina: Mariners Dive Club, 714/559-0846
- 7 Santa Barbara: Sport Chalet, 818/790-9800
- 8 San Clemente: Reef Seekers, 213/652-4990
- 14 Santa Ana College, 714/693-8694
- 15 Catalina: Sport Chalet, 818/790-9800
- 21 San Clemente: Sea Sabres, 213/947-0625
- 29 Marina del Rey Divers, 213/827-1131

Charisma, 213/832-8304, 213/326-7460

22nd St. Landing
78/35 Divers/Capt. John Hess
Call for available dates.

Encore, 213/832-8304, 213/326-7460

22nd St. Landing
78/35 Divers/Capt. Randy Beaver
Call for available dates.

Golden Doubloon, 714/963-4378

22nd St. Landing
65/34 Divers/Capt. Greg Elliott
(Charters exclusively to Catalina) Call number above for open boats or charters.

May:

- 5 Open for Charter
- 6 Marina del Rey Divers, 213/827-1131
- 12 Mr. Scuba, 714/838-6483
- 13 Marina del Rey Divers, 213/827-1131
- 19 Marina del Rey Divers, 213/827-1131
- 20 Aquatic Center, 714/650-5440
- 26 Black Barts, 714/496-5891
- 27 Mr. Scuba, 714/838-6483
- 28 Mr. Scuba, 714/838-6483

June:

- 2 Marina del Rey Divers, 213/827-1131
- 3 Aquatics
- 9 Marina del Rey Divers,

- 213/827-1131
- 10 Aquatic Center, 714/650-5440
- 16 Black Barts, 714/496-5891
- 17 Black Barts, 714/496-5891
- 23 Mr. Scuba, 714/838-6483
- 24 Aquatic Center, 714/650-5440
- 30 Mr. Scuba, 714/838-6483

July:

- 1 Marina del Rey Divers, 213/827-1131
- 7 Marina del Rey Divers, 213/827-1131
- 8 Aquatic Center, 714/650-5440
- 14 Black Barts, 714/496-5891
- 15 Black Barts, 714/496-5891
- 21 Mr. Scuba, 714/838-6483
- 22 Aquatic Center, 714/650-5440
- 28 Marina del Rey Divers, 213/827-1131
- 29 Mr. Scuba, 714/838-6483

Magician, 213/548-6129

22nd St. Landing
65/35 Divers/Capt. Ira Burdine
Call number above for open boats or charters.

May:

- 5 Catalina: Closed Charter
- 6 Catalina: Scuba Toys, 714/527-0430
- 12 Catalina: American Diving, 213/326-6663
- 13 Catalina: Sport Chalet, 818/790-9800
- 19 Catalina: Divers West, 818/796-4287
- 20 Catalina: Scuba Haus, 213/828-2916
- 26-27 Outer Islands: Reef Seekers, 213/652-4990
- 28 Catalina/Olympic Wreck: Oceanic Exploration, 818/760-6796

June:

- 2 Outer Islands: American Diving, 213/326-6663
- 3 Catalina: Scuba Toys, 714/527-0430
- 9 Catalina: Scuba Habitat, 714/594-7927
- 10 Catalina: Scuba Haus, 213/828-2916
- 16 Catalina: Divers West, 818/796-4287
- 17 Scuba Toys: 714/527-0430
- 23 Catalina: Sport Chalet, 818/790-9800
- 24 Catalina: Scuba Haus, 213/828-2916
- 30 Catalina: American Diving, 213/326-6663

July:

- 1 Catalina: Scuba Toys, 714/527-0430
- 4 Scuba Toys, 714/527-0430
- 7 Catalina: Scuba Habitat, 714/594-7927
- 8 Catalina: Scuba Haus, 213/828-2916
- 14 Sport Chalet, 818/790-9800
- 15 Catalina: Divers West, 818/796-4287
- 21 Catalina: Scuba Haus, 213/828-2916
- 22 Scuba Toys, 714/527-0430
- 28 Catalina: Divers West, 818/796-4287

- 29 Catalina: Scuba Haus, 213/828-2916

Maverick, 213/547-3824

22nd St. Landing
58/25-30 Divers/Capt. Floyd Bryan
Call number above for open boats or charters.

May:

- 5 Available for Charter
- 12 Catalina: New England Divers, 213/421-8939
- 19 Available for Charter
- 20 Catalina: Reef Seekers, 213/653-4990
- 26 Catalina: West Coast Divers, 818/708-8136
- 27 Available for Charter

June:

- 3 Catalina: New England Divers, 213/421-8939
- 9 Available for Charter
- 10 Available for Charter
- 16 Closed Charter
- 23 Catalina: Reef Seekers, 213/652-4990
- 24 Catalina: New England Divers, 213/421-8939

July:

- 7 Closed Charter
- 8 Catalina: New England Divers, 213/421-8939
- 14 Closed Charter
- 15 Catalina: West Coast Divers, 818/708-8136
- 21 Closed Charter
- 22 Available for Charter
- 28 Available for Charter
- 29 Catalina: Reef Seekers, 213/652-4990

Scuba Queen, 213/691-0423

Cabrillo Marina
65/38 Divers/Capt. Ed Lord
Call for available dates.

Westerly, 213/833-6048

22nd St. Landing
55/30 Divers/Capt. Jim Ingram
Call above number for open boats.

May:

- 5 San Clemente: Douglas Dive Club, 714/960-2764
- 6 Clemente: Dive 'n Surf, 213/372-8423
- 11 Catalina: Dive 'n Surf, 213/372-8423
- 12 Santa Barbara: Dive 'n Surf, 213/372-8423
- 13 San Clemente: John Roodenberg, 213/536-0404
- 19 San Clemente: Dive 'n Surf, 213/372-8423
- 20 San Clemente: Mr. Scuba, 714/838-6483
- 25 Catalina: Dive 'n Surf, 213/372-8423
- 26 Farnsworth: Hughes Dive Club, 213/324-8583
- 28 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 31 Catalina: Shelley Johnson

June:

- 2 Santa Barbara: Dive 'n Surf, 213/372-8423
- 3 Farnsworth: Mr. Scuba, 714/838-6483
- 9 San Nicolas: Douglas Dive Club, 714/960-2764
- 10 Catalina/Backside: Golden Reef Divers, 818/443-2103
- 15 Catalina: Dive 'n Surf, 213/372-8423
- 16 San Clemente: Hughes Dive Club, 213/324-8583
- 17 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 23 San Clemente: Dive 'n Surf, 213/372-8423
- 24 Begg Rock: John Roodenberg, 213/536-0404
- 30 Santa Barbara: Dive 'n Surf, 213/372-8423

July:

- 1 Santa Barbara: Mr. Scuba, 714/838-6483
- 4-5 San Clemente: Tom Steinhoff, 213/833-6048
- 7 Santa Barbara: Douglas Dive Club, 714/960-2764

Continued

8 Catalina/Backside: Dive 'n Surf, 213/372-8423 12 Catalina: Shelly Johnson 13 Catalina: Dive 'n Surf, 213/372-8423 14 San Clemente: Dive 'n Surf, 213/372-8423 15 San Clemente: Golden Reef Divers, 818/443-2103 21 San Nicolas: Hughes Dive Club, 213/324-8583 22 Catalina/Backside: Dive 'n Surf, 213/372-8423 28 Santa Barbara: Dive 'n Surf, 213/372-8423 29 Whalers, 213/675-2123 Wild Wave, 213/534-0034 22nd St. Landing 65/26 Divers/Capt. Mickey Pittman Call for available dates. LONG BEACH Mr. C, 213/831-9449 Long Beach Sportfishing 55/40 Divers/Capt. Tom Rossin Call for available dates. Sundiver, 213/434-1198 Seaport Village 53/29 Divers/Capt. Rich Wallace Call number above for open boats. 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SAN DIEGO Bottom Scratcher, 619/224-4997 Pt. Loma Sportfishing 63/21 Divers/Capt. Mel Osland May: 5-6 San Clemente: Scuba Science, 602/995-5926 11 Shark Expedition: Bob Cranston, 619/484-1718 12-13 San Clemente: Scuba Science, 602/995-5926 18 San Clemente: Mark Flahan, 619/594-6799 19-20 San Clemente: Scuba Science, 602/995-5926 26-28 San Clemente: Scuba Science, 602/995-5926 June: 2 Coronados: Scuba Science, 602/995-5926 3 Coronados: San Diego Divers Supply, 619/224-2429 9 Coronados: Scuba Science, 602/995-5926 10 Coronados: Ocean Enterprises, 619/565-6054 16 Coronados: Scuba Science, 602/995-5926 17 Coronados: Adventures in Diving, 714/499-4517 22 Shark Expeditions: Bob Cranston, 619/484-1718 23-24 San Clemente: Scuba Science, 602/995-5926 30-72 San Clemente: Scuba Science, 602/995-5926 July: 4 Coronados: Ocean Enterprises, 619/565-6054 7-8 San Clemente: Scuba Science, 602/995-5926 14-15 San Clemente: Scuba Science, 602/995-5926 21 Coronados: Diving Locker, 619/272-1120 22-27 San Benito Island: Scuba Science, 602/995-5926 Horizon, 619/277-7823 H & M Landing	78/35-42 Divers/Capt. Lou & Greg Grivetto May: 5 Coronados: Aqua Marines, 714/492-8615 6 Coronados: Sport Chalet, 619/224-6777 12-13 San Clemente: Aqua Tech, 619/237-1800 19 San Clemente: Sport Chalet, 619/224-6777 20 Coronados: Sport Chalet, 619/224-6777 26-27 San Clemente: Sundiver, 602/996-7665 28 Coronados: Sport Chalet, 619/224-6777 June: 2-3 San Clemente: El Mar Dive Center, 602/833-2971 9 Coronados: Openwater Habitat, 714/744-8355 10 Coronados: Sport Chalet, 619/224-6777 16 Coronados: Sport Chalet, 619/224-6777 17 Coronados: Aqua-Tech, 619/237-1800 23-24 San Clemente: Sport Chalet, 619/224-6777 30 Sport Chalet, 619/224-6777 July: 1 Available for Charter 7 Coronados: Sport Chalet, 619/224-6777 8 Available for Charter 15 Coronados: Sport Chalet, 619/224-6777 20-21 San Clemente: Sun Divers, 602/996-7665 22 Coronados: Sport Chalet, 619/224-6777 28-29 San Clemente: Sport Chalet, 619/224-6777 Sand Dollar, 619/224-4997 Pt. Loma Sportfishing 65/28 Divers/Capt. Bill Johnston May: 5 Coronados: PNL, 602/343-1500 12 San Clemente: Adventures in Diving, 714/499-4517 13 Coronados: San Diego Divers, 619/224-3439 18 San Clemente: Mark Flahan, 619/594-6799 19 Coronados: Scuba Science, 602/995-5926 20-21 San Clemente: Cal-Riv-Val, 619/326-3232 26 Coronados: Adventures in Diving, 714/499-4517 27 Coronados: Diving Locker, 619/746-8980 28 Coronados: Ocean Enterprises, 619/565-6054 June: 2-3 San Clemente: Scuba Science, 602/995-5926	9 Coronados: Diving Locker, 619/746-8980 10-12 Closed Charter 15 Coronados: Diving Locker, 619/272-1120 16 San Clemente: Diving Locker, 619/271-5231 17 Coronados: S. Nevada Dive Center, 702/564-6810 19-21 San Clemente: Pinnacles Dive Center, 415/897-9962 23 Coronados: Water World, 619/763-5531 24 Coronados: San Diego Divers, 619/224-3439 30-71 San Clemente: Diving Locker, 619/272-1120 July: 4 Coronados: Diving Locker, 619/746-8980 7-8 San Clemente: San Diego Divers, 619/224-3439 14 San Clemente: Adventures in Diving, 714/499-4517 15 Coronados: Diving Locker, 619/755-6822 17-19 Closed Charters 21-22 San Clemente: Scuba Science, 602/995-5926 24-8/4 Mexico Spearfishing: Diving Charters, 619/224-4997 The America, 619/584-0742 Mission Bay 32/6 Divers/Capt. Rich Cassens Weekday charters also available. May: 5 Wreck Alley 9 Pt. Loma Kelp Beds 12 Wreck Alley 16 La Jolla Kelp Beds 19 Wreck Alley 23 Pt. Loma Kelp Beds 26 Wreck Alley 30 La Jolla Kelp Beds June: 2 Wreck Alley 6 Pt. Loma Kelp Beds 9 Wreck Alley 13 La Jolla Kelp Beds 16 Wreck Alley 20 Pt. Loma Kelp Beds 23 Wreck Alley 27 La Jolla Kelp Beds 30 Wreck Alley WASHINGTON Sea Wolf, 206/293-4248 Cap Sante Boat Haven 55/18 Divers/Capt. Jess & Allan Starnes Available weekdays. Call above number for open boats or group charter information. May: 5-7 San Juan Islands: Closed 12-18 Canadian Gulf Islands: Open Boat	19-20 San Juan Islands: Open Boat 26-28 San Juan Islands: Closed June: 2-4 San Juan Islands: Open Boat 9-10 San Juan Islands: Closed 16-17 San Juan Islands: Open Boat 23-25 San Juan Islands: Closed 30-71 San Juan Islands: Closed July: 4-8 Canadian Gulf Islands: Open Boat 14-15 San Juan Islands: Open Boat 16-17 San Juan Islands: Open Boat 28-29 San Juan Islands: Open Boat Star Fire, 206/364-9858 Cap Sante Marina 54/25 Divers/Capt. Gordon Bradley Call number above for chartering information. 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Dennis Withner Available 7 days a week Min. 4 divers to reserve boats or join open weekend charters.
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In Search of Some Seafood

Sitting around the beach at Cabo San Lucas the other day I had a craving for some fresh-caught fish. I mean fresh fresh-caught fish, the kind you go out and get yourself. So I grabbed my gear and borrowed a car and headed down to a dive spot I'd been hearing about since pulling into Cabo Harbor.

I drove east for about six miles then turned down a dirt road and headed for the coast. The dirt road, no more than a quarter of a mile long, dead-ended at the sandy edge of a pristine little beach with a reef system that juttied out into the turquoise water like a handful of fingers.

I had arrived at Bahia Chileno, a little-known cove (the Farleys barely mention it in their *Baja California Diver's Guide*) located just inside the Sea of Cortez. It's a great little place with a dive shop, a compressor (although it's a six buck charge for an air fill), full equipment rentals and cold drinks, right there on the beach. No crowds, no fees, no parking hassles. Is this scuba heaven or what?

Pulling my gear from the trunk, I suited up and waded into the water. The good diving starts only 10 feet from shore where you enter a maze of coral heads, grottos and canyons. Everywhere there are fans, anglers and brain-type corals in all the tropical colors. The water is fairly clear and about 78 degrees.

And fish? Oh my Lord. I had come to find fish, and fish are what I found. Multitudes of fish, world conventions of fish. All the tropicals in their striped and polka-dotted clown suits, a few sober pelagics looking like IRS agents at a Halloween party. I saw more fish at Bahia Chileno than I've seen anywhere, not counting aquariums and bait tanks, of course, but including the Bahamas.

But it's not quite scuba heaven here at Bahia Chileno. As I swam among the swarms of fish I was saddened to find many bald patches along the reefs where souvenir-hunting divers have chopped off

coral. As far as I'm concerned, that's nothing more than vandalism. Could you imagine going to Europe and knocking off chunks of marble from a historic church for a souvenir? It's the same thing, the way I see it.

Anyway, beauty and destruction seem to walk hand in hand down here on the tip of Baja. You see it every day, for example, down on the boat docks in Cabo San Lucas when the sportfishing fleet comes in. One after another, huge black marlin, beautiful fish, 150- to 200-pounders, are strung up by their tails like marine Mussolinis. Then sportsmen stand next to them for a snapshot, their pasty beer bellies oozing out from under their T-shirts a stark contrast to the shiny black bodies of the marlin. The sportsmen grin, the shutters click, and they walk off cracking beers as the fish is cut down and, believe it or not, abandoned.

Block and tackle rattles and the next marlin is hoisted, and up waddles another group of would-be Hemingways, the shutters click and the fish crumples to the ground. It happens a dozen times a day. I know that because I sat under an awning for an entire afternoon sipping cold beer and watching it.

The only thing that saves this scene from total deprivation is that while the fish are abandoned, thankfully they do not go to waste. As soon as the sportsmen head off to the nearest cantina, the local folks attack the marlin with flashing knives, and in a matter of minutes all that's left are carcasses.

Which may explain why, when I was down on Chileno Reef, despite the dense concentrations of fish, despite the fact that I had come down here for the sole purpose of bagging some fresh fish, I found it hard to shoot anything. All these multi-colored tropicals, these king angelfish and azure parrotfish, the Panamic sergeant majors and guineafowl puffers, they were all just too beautiful to kill.

Besides, they don't look like food.



"Baja John."

Diving with these colorful critters is like swimming around on a trendy nouvelle cuisine buffet table with delicately arranged platters of edible art. You know what I mean; radishes carved into swans and paintings made from sauces. Technically there's a lot of food here, but are you supposed to take a fork to a work of art?

Just when I thought all was lost, a sheephead, the cheeseburger of the ocean, cruised by grinning at me. All right! I knew what to do with that sucker. Trouble is, that sucker knew I knew what to do, and so it didn't wait around for me to do it. The sheepheads at Chileno Reef have obviously been shot at before, because they were savvy enough to stay out of the dead-end holes and away from the tip of my pole spear.

Needless to say, I didn't get any game that day at Bahia Chileno, but I had a great dive, so I didn't feel too bad about it. Walking out of the water, I figured I'd leave the coral and the fish for the next diver, who will, I hope, leave them for the next diver, and so on. I mean, I guess if I want fresh fish that bad I can elbow my way into the throngs of locals at the marlin dock and pull my knife out too. Or better yet, I think I'll wander on over to the Broken Surfboard cafe and buy a *torta pescado* and a cold beer and just say to hell with it. ■

"Baja John" Francis is PACIFIC DIVER's S.O.B. contributing editor. He covers the sport diving scene in the Sea of Cortez.

Uncrowded, Unhurried, Unbelievable

Elite Dives offers a relaxing alternative for exploring the waters of Oahu.

Article by John Brumm
Photos by Steve Essig

Flying into the Honolulu International Airport, you hit rush hour traffic as you fight to get to your hotel room in the bowels of Waikiki. Falling into bed, you try to get some jet-lagged sleep before morning arrives and you have to rush bleary-eyed down to the boat harbor to meet up with a charter dive boat for the first dive of your vacation. As you pull up to the quay, you see about 20 other haggard-looking divers being herded on board the dive boat. The atmosphere is tense, the routine is rushed, but you charge on, because this, after all, is your vacation, and you're supposed to be having fun.

The boat veers away from the dock and charges out to the first dive spot. You can almost hear the boat screeching to a stop as the anchor drops. Divers stumble over each other into the water, blow off a tank of air, then climb over each other, hurrying to get back on board before the boat leaves without them.

Same routine at the second dive spot and then the boat charges back to the harbor, drops you and your gear on the dock, loads up another group of divers and powers back out to sea, leaving you standing there dizzy wondering who in the hell talked you into taking a vacation in the first place.

In the hustle-bustle world of Oahu dive tourism it's often easy to get caught up in the craziness of the crowds and the timetables and the dive schedules, and in doing so forget that you're supposed to be taking it easy during this short reprieve from the real world. The trick is to head for the southwestern side of the island to the Waianae Boat Harbor, and then look for the dive boat on whose cabin sides is painted the motto: *Uncrowded, Unhurried, Unbelievable*.

The boat is the *Elite Too*, a 45-foot custom dive vessel owned by Elite Dives. *Elite Too*, like many other dive boats in the area, makes daily runs out to popular dive spots like the wreck of the *Mahi*, the

Makaha Caverns and the Land of Oz. The only thing is, *Elite Too* is in no hurry going about it.

Elite Dives was founded three years ago by 32-year-old Scott Turner, a 16-year resident of Oahu with 10 years as a full-time dive guide and tour operator under his belt. Prior to starting Elite Dives, Turner had been running a business supplying boats and ground transportation for Honolulu dive stores. It was during this time that he found himself barraged with complaints from vacationing divers who felt their dive boat trips were too crowded and too rushed. So Turner, with partner Henry Rudkin, decided to start Elite Dives.

The initial idea was to attract those vacationing divers willing to spend \$20 or \$30 more for a less crowded boat, a less hurried trip and lots more personalized service.

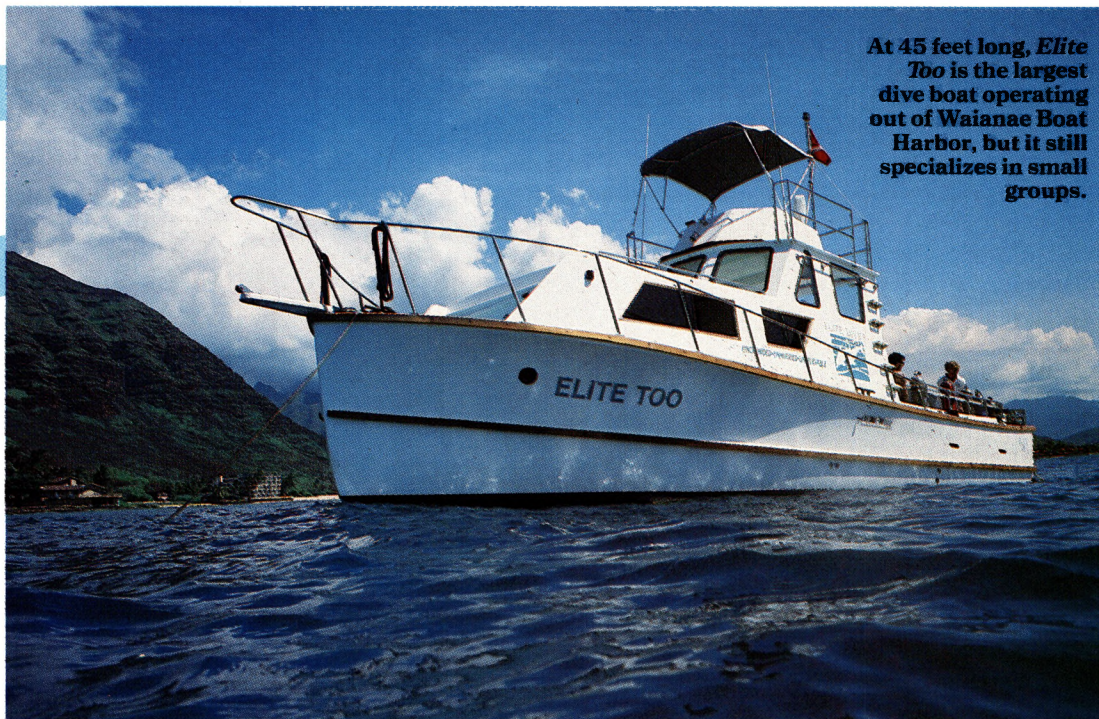
The first step in attracting such a dive customer was to get a first-class dive boat. Turner bought *Elite Too* as a bare hull at a Navy auction and customized it for diving in his own boat yard. He built a huge main cabin outfitted with benches to protect passengers from inclement weather. Then he installed bench seating on the foredeck, a large sundeck for lounging and a roomy flying bridge. The dive deck is designed so that the dive gear being used is stowed underneath benches while extra tanks and dive gear are stowed in lockers below decks, thus keeping the suiting-up area clear. To top off the conveniences, Turner installed two hot freshwater shower nozzles on the swim step for rinsing the salt off, then he opened for business.

At 45 feet, *Elite Too* is the largest dive boat operating out of Waianae Boat Harbor, but it still specializes in small groups. Although the vessel is certified for 25 divers, Turner limits his passenger loads to no more than a dozen divers, so the dive deck remains uncluttered and "Uncrowded."

When you get to the boat in the morning — or afternoon, depending upon



Spare tanks and gear are stored in special lockers to eliminate unnecessary clutter on the dive deck.



which trip you take — Turner and his crew are standing by to load your gear on board. When everybody is aboard and settled, Turner serves breakfast rolls and fresh pineapple then casts off and heads out for the first dive of the day, usually the wreck of the *Mahi*, only about a 20-minute ride from the harbor.

After a dive on the *Mahi* you climb back aboard the *Elite Too*, rinse off with the freshwater nozzles and drop your gear. Turner has cold drinks and cookies ready for you to enjoy while he hooks you up to a fresh tank. As other dive boats are frantically loading up their passengers, yanking up anchors and blasting off to the next dive sites, the “Unhurried” divers aboard *Elite Too* enjoy some crackers and cheese up on the sundeck.

When everybody's ready to go, Turner weighs anchor and heads for the second dive spot. During the trip passengers are welcome to enjoy the ride anywhere on the boat. You can sit on the bow or back on the afterdeck or even up on the flying bridge with Turner, who skippers the boat.

Normally, by the time you arrive at the second spot of the day, the other dive boats are already on their way back to the harbor. Meanwhile, on *Elite Too*, there's another round of cold drinks, and another dive, and then a leisurely cruise back to the harbor, culminating a relaxing half-day of diving that is pretty “Unbelievable.”

However, Elite Dives' *Uncrowded*, *Unhurried*, *Unbelievable* business philosophy is not without its price. For the tourist trade Turner charges \$90 for a two-tank dive, which includes all gear, all on-board refreshments and round-trip transportation to and from your hotel. If you have your own rental car and can get

yourself to the Waianae Boat Harbor on your own, Turner reduces the price to \$80; if you bring your own gear, the price is further reduced to \$70.

Elite Too runs two dive trips a day, leaving at 9 a.m. and at 2 p.m. And every Friday night Turner offers a dusk dive and a night dive on the *Mahi*.

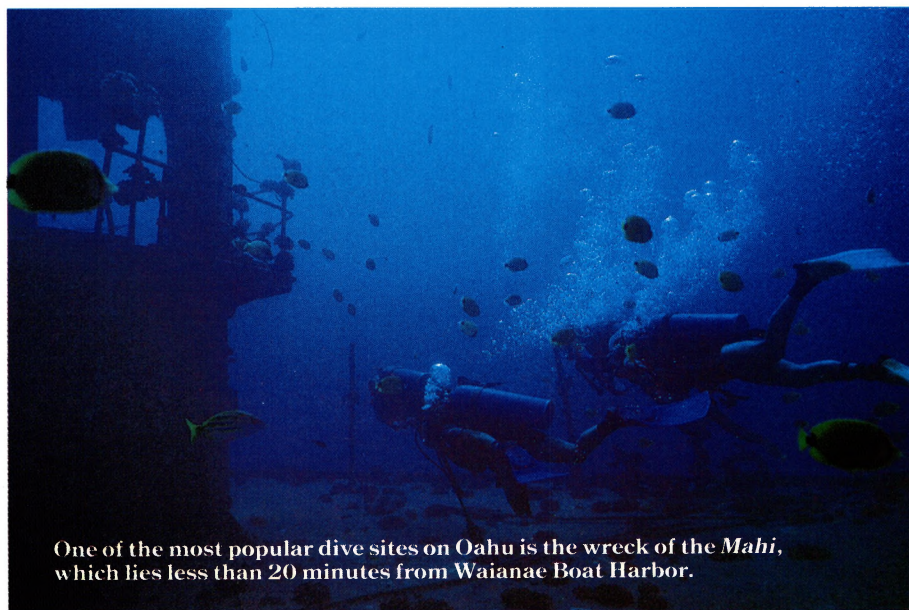
Also, twice a month Turner features his Molokai trip. Divers fly from Honolulu to Molokai on Saturday morning and check into the Sheraton Resort Hotel. Rental cars are waiting at the hotel to transport you down to the boat, which Turner brings over from Waianae the night before. You load up and head out for a three-tank dive at seldom-visited dive spots, then at the end of the day Turner throws a fresh lobster/seafood/steak barbecue on the boat. Afterwards, you return to your hotel

for the night, and fly back to Honolulu in the morning. The Molokai trip goes for about \$225.

In addition to dive trips Elite Dives offers four-day PADI/NAUI certification courses for \$400 complete (including round-trip transport each day and all gear) and students can schedule their courses to fit their own timetables.

So if you happen to find yourself on Oahu, and you want to relax with some morning or afternoon Hawaiian boat diving, give Jennifer at Elite Dives a call at (808) 637-9331. Tell her when you'd like to go out and what you'll need in terms of gear and transportation. Turner and his staff will take it from there. And all you have to do is, well, take it easy. ■

John Brumm is the editor of PACIFIC DIVER.

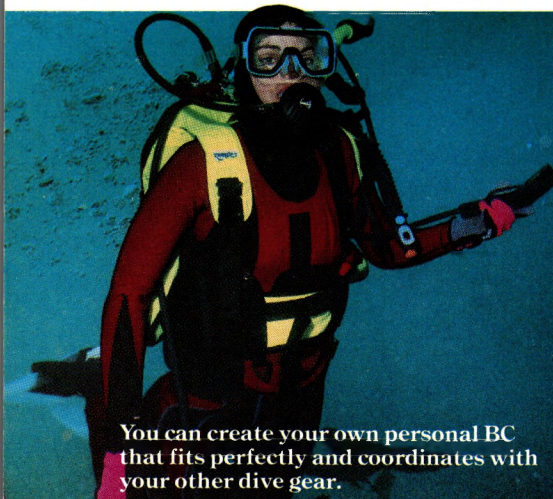


One of the most popular dive sites on Oahu is the wreck of the *Mahi*, which lies less than 20 minutes from Waianae Boat Harbor.

PRODUCT REVIEWS

Zeagle's 7200 Series BC

The 7200 Series "PFS" (Personal Fit System) integrated-weight buoyancy compensator from Zeagle Systems enables you to build your own custom BC. The system consists of five basic components (not including a range of available pockets and accessories): the backpack, the shoulder straps, the cummerbund, the bladder and the inflator/deflator device. With the exception of the inflator/deflator, these components are available in a variety of sizes and colors, so you can mix and match them to create a personal BC that fits you perfectly and that coordinates with your other dive gear.



STEVE ESSIG

The integrated weight system, designed for use with hard or soft weights (but best-suited for bags of lead shot), is designed to work in conjunction with the back-mounted bladder by providing you with the proper balance while you're in the water. Integrating the weights into the BC not only eliminates the need for a weightbelt, but it also allows the inflation system and the weight system to work together, unlike conventional systems where the positive buoyancy of the BC pulls against the negative buoyancy of the weights around your waist.

Zeagle's weight system is available in Standard and Extended models. The Standard model features one weight pocket per side and is capable of holding a maximum of 30 pounds of shot, while the Extended model has two weight pockets per side for those who dive with over 40 pounds of weight.

So what happens if you find yourself in a situation where you have to drop your weight? On the 7200 Series BC Zeagle offers an innovative "Ripcord" dumping system. A short pull on a conveniently

located handle instantly drops the weight on both sides.

The 7200 Series BC is streamlined and unencumbered. On the other hand, it doesn't offer any built-in pockets. However, it does have a half dozen D-rings for attaching optional pockets that Zeagle makes available.

The only really unattractive thing about the Zeagle 7200 system, which in all fairness would apply to any integrated-weight BC, is the problem of handling the BC out of the water. For example, having your weight system and your BC system separate makes it a lot easier to handle and transport the gear. But on integrated-weight BCs, since you don't have a weightbelt, you have to carry your weight in your dive bag, which makes it just that much heavier to lug around. And then once you get your gear to the boat or to the beach, simple things like hefting the BC with all its integrated weight over a tank and positioning it and tightening down the straps suddenly take on a whole new meaning. Of course, you could take that weight out before you do all this, but then you have four loose bags of shot to contend with.

However, we realize that, for the most part, divers buy a piece of dive gear for its performance in the water, not on dry land. And in the water, Zeagle's 7200 Series BC is a well-designed, well-balanced and extremely comfortable buoyancy control system.

The Zeagle 7200 Series BC retails for about \$375. For more information, contact Zeagle Systems, 37150 Chancey Rd., Zephyrhills, FL 33541; (813) 782-5568.★★★½

Snapper Safety Signal

Have you ever found yourself underwater when, for example, a huge bat ray cruises by, and you turn to show your dive buddy, but the fool has his head buried in a lobster hole? In such a situation you could grope for your knife, if you're wearing one, and bang it against your tank; that is, if the knife is heavy enough and if, in all the excitement, you can make contact with the bare metal between your tank boot and backpack straps. And then just maybe your partner will hear you before the bat ray disappears into the gloom.

Or, you can use the Snapper Safety Signal. The epitome of the simple product, this is no more than a large rubber band that fits over your scuba tank. Attached to the rubber band is a solid plastic ball. When you want to attract somebody's at-



STEVE ESSIG

A real attention-getter if neither you nor your dive buddy is wearing a hood.

tention underwater, you simply reach for the plastic ball, pull hard, and let the sucker go. It snaps back against the tank, makes a clang, and attracts the attention of your partner.

That's the theory behind the Snapper Safety Signal, and it works. The only problem is, you can't really hear it when you're wearing a hood, a common piece of gear among Pacific divers.

We found that if you give the Snapper a tug when you're not wearing a hood, the clang it produces against the tank will definitely get your attention, even if your back is turned. However, at 60 feet wearing either a drysuit hood or a quarter-inch wetsuit hood, that sharp clang gets transformed into a muffled *thwack*. Consequently, unless your dive buddy is looking right at you while you're pulling on the thing, chances are he's not going to hear it.

In conclusion, if you don't dive with a hood, and your dive buddy doesn't either, the Snapper Safety Signal produces a metallic clank against a tank that is an excellent attention-getter. If you do dive with a hood, the Snapper Safety Signal will still make that distinct metallic clank; you just won't be able to hear it very well.

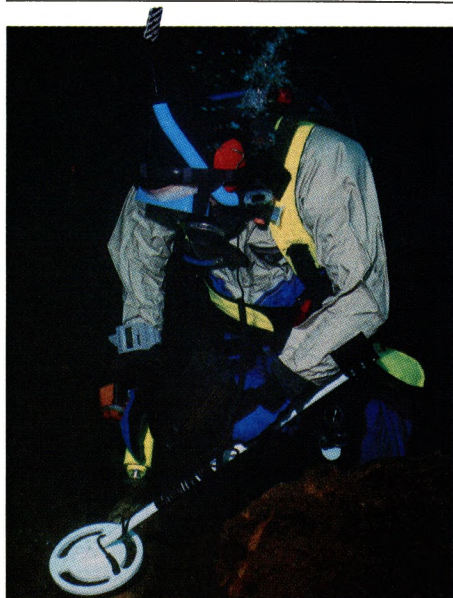
The Snapper Safety Signal comes in a variety of colors, including pink, yellow, green, blue and black, and retails for about \$9.95. For more information, contact Snapper Products, P.O. Box 561793, Miami, FL 33156; (305) 666-1038.★★★

Fisher's 1280-X Metal Detector

Has the thrill gone out of your underwater life? Are you looking for a little change of pace in your diving, but you don't want to become a photographer or a spearfisherman?

Well, have you ever considered becoming an underwater treasure hunter? We recently discovered that poking around on the ocean floor can be a heck of a lot of fun, especially with a metal detector.

Fisher Research Laboratory's 1280-X works in salt water as well as on dry land. It's lightweight and surprisingly simple to operate. The entire unit is comprised of an



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The quest for treasure will get the adventurous blood boiling in you in no time.

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The Fisher 1280-X retails for \$649.95. For more information contact Fisher Research Laboratory, 200 W. Willmott Rd., Los Banos, CA 93635; (209) 826-3292.★★★

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FOCUS ON: Blue Rockfish



Sebastes mystinus
Class: Osteichthyes
Order: Scorpaeniformes
Family: Scorpaenidae

Article and photo by David Wrobel

As you glide among the spires of giant kelp, a dark mass looms in the distance. Closer inspection reveals a large group of blue rockfish, shining in the sun rays penetrating the kelp canopy. These bluish (with black mottling) members of the scorpionfish family are familiar sights to divers throughout North America's Pacific coast, inhabiting subtidal

waters to as deep as 2,000 feet from Alaska to northern Baja.

Blue rockfish are one of the most common of the more than 60 species of *Sebastes* and usually the most abundant rockfish caught by sport anglers. Any large group of rockfish seen hanging beneath the kelp canopy is likely to consist mainly of this blue species, which is one of the few schooling rockfish. Aggregations can often be easily approached for observation and photography and are an impressive sight when bathed in streams of sunlight.

As with other scorpaenids, blue rockfish are equipped with venomous dorsal and anal fin spines and should be handled with care. A puncture wound from these spines can be painful, but not nearly as dangerous as that from the related lionfish or stonefish.

Blue rockfish are mid-water planktivores, feeding on krill and other small crustaceans, larval fish and a variety of

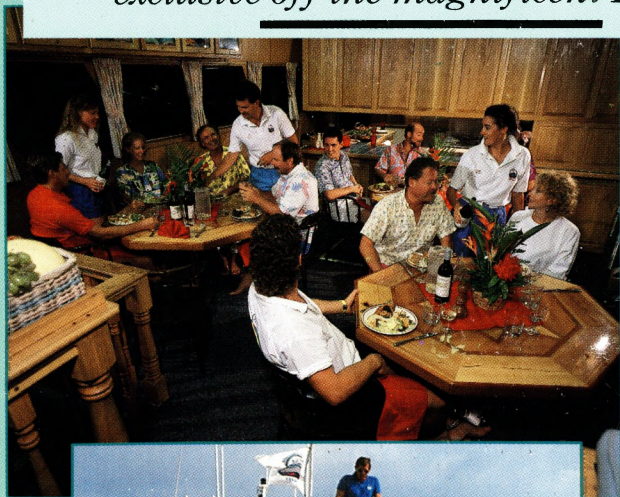
zooplankton. They also are one of the important predators of jellyfish, ctenophores, salps and other gelatinous animals. Moon jellyfish (*Aurelia*) that venture into the kelp forests often suffer mercilessly from the relentless attacks of blue rockfish.

All rockfish are ovoviviparous, with internal fertilization and the release of thousands of tiny planktonic young. Blue rockfish larva are released in the winter and spend a few months as part of the zooplankton community while feeding on copepods, rotifers and any tiny creatures they can grasp. The vast majority meet a quick end due to the efforts of numerous predators. Those that survive to the juvenile stage have an attractive red mottling and are frequently encountered during late spring and early summer kelp forest dives. ■

David Wrobel is an aquarist and biologist at the Monterey Bay Aquarium with a special interest in life in kelp forests.



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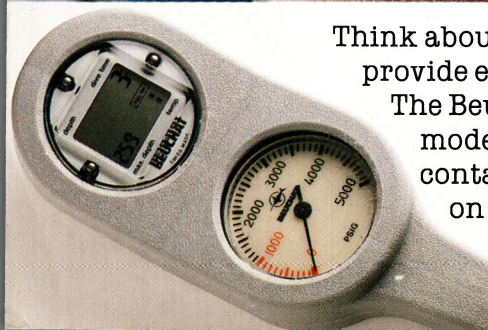
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